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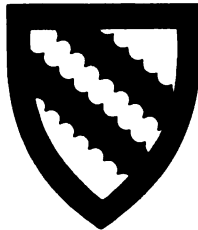
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THE SPRINGFIELD SURVEY

SHELBY M. HARRISON, Director

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THE SCHOOLS OF SPRINGFIELD, ILLINOIS.

LEONARD P. AYRES, Ph.D., Director, Division of Education, Russell Sage Foundation.

II

RECREATION IN SPRINGFIELD, ILLINOIS.

RECREATION HANMER, Director, and CLARENCE ARTHUR PERRY, Associate Director, Department of Recreation, Russell Sage Foundation.

III

HOUSING IN SPRINGFIELD, ILLINOIS.

JOHN IHLDER, Field Secretary, National Housing Association.

IV

CARE OF MENTAL DEFECTIVES, THE INSANE, AND ALCOHOLICS IN SPRINGFIELD, ILLINOIS.

WALTER M. TREADWAY, M. D., Assistant Surgeon U. S. Public Health Service, Director National Committee for Mental Hygiene.

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PUBLIC HEALTH IN SPRINGFIELD, ILLINOIS.

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SPRINGFIELD SURVEY EXHIBITION:

Findings and recommendations of the Survey were presented in an Exhibition in Springfield, under the direction of E. G. ROUTZAHN, Associate Director, Department of Surveys and Exhibits; MARY SWAIN ROUTZAHN, Exhibition Director; and WALTER STOREY, Director of Design and Construction.

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INDUSTRIAL CONDITIONS IN SPRINGFIELD, ILLINOIS

A SURVEY BY THE COMMITTEE ON WOMEN'S WORK AND
THE DEPARTMENT OF SURVEYS AND EXHIBITS
RUSSELL SAGE FOUNDATION

LOUISE C. ODENCRANTZ
ZENAS L. POTTER



THE SPRINGFIELD SURVEY
INDUSTRIAL SECTION

DEPARTMENT OF SURVEYS AND EXHIBITS
RUSSELL SAGE FOUNDATION
NEW YORK CITY
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I

INTRODUCTION

SPRINGFIELD AND INDUSTRY

Work and work conditions, especially in the gainful occupations, are important factors of human welfare. This would be obvious from the mere number of persons directly affected, if for no other reasons; and the situation in Springfield shows the city no exception to this rule. The 1910 census put Springfield's population at 51,678, much the larger part of these, some 42,269, being persons ten years of age and over.* These represented 20,759 males and 21,510 females. Of the males, 17,014 (or 82 per cent of all males ten years of age and over) were employed in gainful occupations; and the number of women and girls so occupied was 5,201, or 24 per cent of all females in this age grouping. Taking the numbers in both sexes, 22,215 persons, i. e., 53 per cent of all individuals ten years old or older (or 43 per cent of all people in the city), were engaged in work commonly classed as gainful.

The occupation groups giving employment to the largest number of males were manufacturing and mechanical pursuits, trade, mining, and transportation. Those giving employment to the largest number of women and girls were domestic and personal service, manufacturing and mechanical industries, and professional and clerical service. Including persons of both sexes, more than twice as many were engaged in manufacturing and mechanical pursuits as were employed in any of the other occupation groups. The detailed figures showing numbers in these groups are presented in Diagram 1 on page 2.

* The United States Census Bureau estimated Springfield's population in 1914, the year of the field work of the survey, to be 57,972.

THE SPRINGFIELD SURVEY

Springfield nevertheless can hardly be regarded as preëminently a manufacturing city. Fourth city in the state in popu-

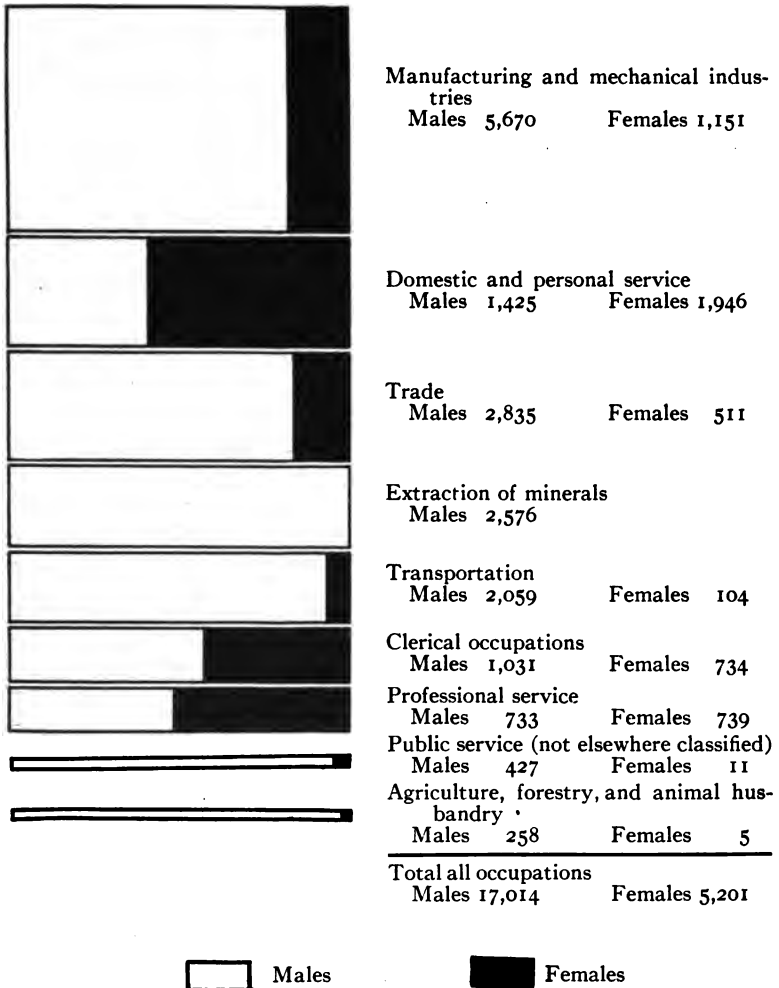


DIAGRAM I.—PERSONS TEN YEARS OF AGE AND OVER IN SPECIFIED OCCUPATION GROUPS, SPRINGFIELD, 1910

From Thirteenth United States Census, 1910, Vol. IV, pp. 274-279.

INDUSTRIAL CONDITIONS

lation, it ranks eleventh in the number of factory wage-earners and fourteenth in the value of its products. But when its commercial, mining, and transportation activities are added to its manufactures, the city takes a relatively high place among cities of its size as a business and industrial center. And as a factory city Springfield has recently been gaining ground. While the increase in population from 1900 to 1910* was 51 per cent, the number of wage-earners in industry from 1899 to 1909 increased 66 per cent, and the value of manufactured products advanced 145 per cent. In 1909 the United States census reported 4,355 persons engaged in manufacturing, of whom 3,652 were wage-earners. In 1910 it reported 6,821 persons engaged in manufacturing and mechanical industries—a few new groups not counted in 1909 having been included in 1910; 5,670 of these were males ten years of age and over, and 1,151 females of the same age group.

The most important manufacturing industries of the city, judged by the value of their output and listed in the order of their importance, are the making of grist mill products, shoes, zinc products, watches, agricultural implements, and electrical supplies. Judged by the number of persons given employment, a test more important for our purposes, the list in the order of the number employed is: watches, shoes, electrical supplies, agricultural implements, asphalt paving, and zinc.† The Elevator Milling Company, which tops the list of the Springfield factories in value of output with an annual product worth \$2,250,000, employs but 40 men, while the Illinois Watch Company, with an annual output valued at about \$1,100,000, employs 940 persons—by far the largest number to be found in any factory in the city.

* Five per cent of the increase is due to annexation of territory. This annexation doubtless partially accounts also for increases in the number of wage-earners and in the value of manufactured products.

† These statements regarding value of products and number of workers in different industries and establishments are based upon facts gathered in 1914 by the Springfield Commercial Association. They cover 83 manufacturing establishments, including all factories of any importance. Some small establishments were not listed, but even had these been included it is not likely that the ranking would be altered.

THE SPRINGFIELD SURVEY

Following is a list of Springfield manufacturing establishments employing 100 or more persons:

Establishment	Product	Approximate number of employees
Illinois Watch Company	Watch movements	940
Roberts, Johnson, Rand Shoe Company	Shoes	550
Sangamo Electric Company	Electric meters and supplies	500
Racine-Sattley Company	Agricultural implements	450
Capital City Concrete Construction Company	Asphalt paving	200
National Zinc Company	Zinc	175
Lincoln Park Coal and Brick Company	Brick	111
Ide and Sons Engine Company	Steam engines and castings	100
Springfield Boiler and Manufacturing Company	Boilers and pipe	100

The soil of Sangamon County, in which Springfield is located, and of adjoining counties is very fertile and the territory is well populated. The district is underlaid with soft coal, and village settlements have sprung up around the mine tipples. The city is thus the trade center of a thriving territory, and the third largest occupation group—second largest among the men alone—is composed of those engaged in trade.

A number of coal mines located in or near the city, besides supplying industries with cheap motive power, furnish employment to approximately 2,500 male residents. These form about 10 per cent of all Springfield males ten years of age and over, and since, with the exception of managers and supervising officials, they are all members of labor unions, their numbers and purchasing power have done much to give strength locally to the organized labor movement.

Six steam railroads and one electric line converge in the city. Persons employed on these, with those engaged in meeting local transportation needs, number over 2,000.

From the standpoint of nationality Springfield is peculiarly American, 81 per cent of its people being American-born whites and another 6 per cent American-born Negroes. Its factory workers and skilled mechanics are for the most part native-born Americans. Immigrant laborers generally fill the places at the bottom of the industrial ladder.

INDUSTRIAL CONDITIONS

The above are a few of the important general facts on the industrial situation in Springfield; the circumstances of employment in its factories and mines, its transportation and trade centers are to make up the main subject matter of this report.



SPRINGFIELD AS INDUSTRIAL CENTER

Springfield may hardly be regarded as preëminently a manufacturing city. When, however, its commercial, mining, and transportation activities are added to its manufactures, the city takes a relatively high place among cities of its size as a business and industrial center. And as a factory city Springfield has recently been gaining ground. Its manufactures are diverse, ranging from agricultural implements to watches, building brick to shoes, grist mill products to asphalt paving, and on through a long list.

The picture shows the plant of the Illinois Watch Factory, the largest Springfield factory, which employs nearly 1,000 workers. The factory is well lighted and surrounded by beautiful grounds

PURPOSE AND SCOPE

To view industry in Springfield from the angle of social welfare and to examine the needs disclosed was the purpose of this investigation. Industry exists for people, not people for industry; and industry can never be considered satisfactory until it serves effectively those who furnish capital and directing ability, those who furnish labor, and those who form the consuming community.

THE SPRINGFIELD SURVEY

In what, then, in this connection, does social welfare consist? Few questions give rise to more conflicting views. There are, however, certain general principles and minimum standards in industrial matters upon which there is considerable agreement among those who have given thought to these questions. As an aid in considering the problems to be dealt with in Springfield, and with a view to formulating a basis for evaluating conditions and needs, a statement of these general principles will be useful. We are fully aware, however, of the danger that a listing of present minimum requirements for Springfield and Illinois may be taken as a statement of conditions that will be good enough, and thus be turned into a set of maximum requirements—in other words, the danger that they may be taken to represent the ultimate rather than the immediate goals ahead.* We would, therefore, repeat that the several propositions represent minimum requirements—they are requirements upon which there is some measure of agreement and approval among those who have given the matters thought, and particularly among those who speak neither for the employer nor the employe but for the public.

First and elementary among these matters are working conditions. These should be made as wholesome and safe as possible. Fire hazard should be minimized, machinery guarded, sanitary conditions maintained, industrial diseases prevented, and good light and ventilation provided. The maintenance of such conditions is a first responsibility of the employer.

Second, until children are sixteen years of age it is essential that they develop normally and receive training for the work of life. Any occupation, therefore, is objectionable which interferes with such development or training. Under fourteen, children should not be employed in gainful occupations.

Third, hours of labor should not be so long as to injure health or to deny workers opportunity for self-improvement, the de-

* For a statement of Social Standards for Industry adopted as a part of the report of the Committee on Standards of Living and Labor of the National Conference of Charities and Corrections and presented to the session of the Conference held in Cleveland in 1912, see Appendix A, pp. 157-162.

For a statement of principles adopted by the Federal Council of Churches of Christ in America in Chicago in 1912, see Appendix B, pp. 162-163.

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velopment of home life, and an intelligent interest in public affairs. Eight hours for a day's work is a standard which is now widely accepted.

Fourth, every worker should have one day of rest in seven.

Fifth, women and children should not be employed at night.

Sixth, workers who give their full working time to an industry should receive as a very minimum a wage which will provide



SPRINGFIELD AS MINING CENTER

Coal mining furnishes employment for approximately 2,500 Springfield residents. The fact that these workers are thoroughly organized adds considerably to the strength of the labor union movement in the city. Though wage rates of the miners are comparatively good the work is very irregular and the annual earnings of the workers are low

the necessities of life. This means, of course, that men with families dependent upon them should receive enough for the support not only of themselves but of their families. Otherwise family life will be undermined. If the business cannot provide this there is serious question whether it has a right to exist.

THE SPRINGFIELD SURVEY

Seventh, either the "necessities of life" should include enough to allow workers to carry insurance and save something for old age or else industry should provide directly for the care of incapacitated workmen and for the dependents of workmen who are killed or used up at work, through payment made by the employer—the cost to be distributed over society by some form of insurance or other method.

Eighth, irregularity of employment should be minimized and when workers lose their positions adequate facilities should exist to help them find new places.

Ninth, the bargaining power in settling the terms of the work agreement should be as evenly balanced as possible as between the employer and the employee. This would recognize the right of employers and employees alike to organize or form unions.

If some may doubt the feasibility of requiring industry to meet these requirements now, few people we believe will question them as minimum conditions which industrial life must very soon provide and for which the community, because it is always an interested party, should strive.

In this report the endeavor will be to show how far Springfield conditions measure up to or fall short of these standards, and, as far as possible when they fail, to suggest means by which they may be brought more nearly into keeping with them.

TIME AND METHOD

The facts presented in the report, unless otherwise indicated, describe conditions found in Springfield during the spring and early summer of 1914, the period covered by the field work of the survey. The field work occupied the time of two investigators, one for four and one for six weeks, plus the employment of their time for several weeks in compiling data from existing records. In general the plan was (a) to visit factories and mercantile establishments in order to examine physical conditions and gather data regarding hours, wages, and similar matters; and (b) to call on a list of workers in their homes, selected by a method which aimed to secure representative individuals, for the purpose of securing from them a full statement of their employment conditions. Information also was secured from labor organiza-

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tions, while in the case of the Illinois state free employment agency a detailed study was made in the office of the agency. Liberal use was made of state reports containing industrial facts relating to Springfield, and recent data gathered by the Springfield Commercial Association proved serviceable. Throughout the investigation special attention was paid to the planning and execution on the part of the state of methods of promoting industrial welfare, since through this channel public opinion is very potent in influencing industrial conditions.

II

PHYSICAL SAFETY IN INDUSTRY

Physical safety in industry is an elementary requirement. The problem of dealing with the industrial hazards to life and health, moreover, is rendered extremely important and serious because of the fact that workers, in Springfield as elsewhere, spend such a large part of their waking hours in the factory, mine, laundry, store, or other work places.

These industrial hazards are of three kinds: danger from accident other than fire, from fire, and from disease. For the purpose of discovering, as far as time permitted, the nature and extent of the hazards in Springfield inspections were made of the two largest laundries, of all save one of the factories employing 100 or more persons, of several of the smaller factories, and of all of the larger and a few of the smaller mercantile establishments. Information was also gathered from workers at their homes and all available official statistics regarding deaths and injuries were consulted.

No establishment visited showed such marked disregard for the safety and physical welfare of the workers as to omit all the more common and simple safeguards. Some showed unusual care in safety and sanitation. On the other hand, in certain Springfield work places, employes were subjected to well recognized industrial hazards, over 200 establishments, for example, being found to have unguarded machinery, fire hazards, or other dangerous conditions.

Most factories—and in this again they are not unlike many in other communities—occupy buildings erected before modern standards of factory construction had been developed and they consequently do not represent the best type, either from the standpoint of the workers' welfare or of efficiency in production. Doubtless if reconstruction were possible, the new buildings

INDUSTRIAL CONDITIONS

would differ radically from those now occupied. This is presumed from the fact that the more recently erected Springfield factories are of a superior type. Fireproof materials, particularly in stairways and elevator shafts, would undoubtedly be more largely used. Plans, moreover, would recognize in more detail the uses to which the buildings are to be put. Lighting would in many cases be more ample and better related to the positions and tasks of the workers. Safety features, ventilation, and sanitation would receive greater attention. Even old buildings, however, may be improved, and the employers' responsibilities are not being discharged until these working quarters are made as safe as circumstances will permit.

WORK ACCIDENTS AND THEIR PREVENTION

Work accidents, according to the estimate of the ex-president of the National Association of Manufacturers, every year in the United States result in 40,000 deaths and 2,000,000 injuries, half of which are preventable.* Their cost in suffering and privation cannot be measured. To this appalling total Springfield contributes its measure. The recorded data for Springfield, however, are meager and undoubtedly understate the truth; but, though understatements, they demand attention.

Between 1909 and 1913, the five years immediately preceding the survey field work, the death certificates show that at least 36 persons lost their lives in Springfield through some kind of industrial accident. These were distributed by years as follows: 1909, nine fatal accidents; 1910, five; 1911, six; 1912, ten; 1913, six.

Railway employees, 11 of whom were killed while at work, furnished the largest number of fatalities, mine workers with 10 fatal accidents came next; while the lives of five men engaged in the building trades, five electrical workers, three factory employes, and two persons engaged in miscellaneous occupations were sacrificed in industry. These figures, moreover, very likely do not include all fatal work accidents, for death certificates in many cases gave such indefinite causes of death as "struck by falling

* J. Kirby, Jr., ex-president National Association of Manufacturers in an address before the First Co-operative Safety Congress.

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object" or "injured by fall," without specifying details or the occupations of the victims. Again, many accidents not above included happened to coal miners who lived near the city but outside the corporate limits. Thus in 1913 the State Bureau of Labor Statistics reported four deaths of Springfield miners, three of whom upon investigation were found to have lived near but not inside the city, and were, therefore, not included in the city figures which are the basis of our calculations.

But even confining ourselves to the 36 fatalities definitely recorded, the situation should be disturbing indeed. It is true that these deaths were spread over a period of several years, but that does not render each death less serious nor lessen the importance of this number of violent deaths, though by being scattered they, of course, were less spectacular. If the 36 had been killed in a single fire or in one fell swoop of a deadly epidemic, the community would have been shocked and aroused to the grave reality of what had happened; and it is only at times of such wholesale destruction that the community fully appreciates what a calamity to the home the death of the breadwinner is, no matter whether he be one of the victims who dies in a group or one of those cut down during a period of months or years.

NON-FATAL ACCIDENTS

As to non-fatal accidents, data for Springfield are found in the reports of the state Bureau of Labor Statistics. These, however, are also quite incomplete. The Springfield accidents reported there are classified as follows:

1. Those resulting in the loss of 15 or more days' time which occurred in factories, mercantile establishments, mills or workshops not coming under the workmen's compensation law.
2. Those resulting in the loss of 30 or more days' time which occurred in other employments not coming under the compensation law.

Data regarding accidents occurring in establishments coming under the compensation law are shown, but not by cities, and consequently are not available for the uses of this report.

Nevertheless in spite of these limitations upon the data that would show something of the total toll taken, 35 non-fatal acci-

INDUSTRIAL CONDITIONS

dents were reported for Springfield during the single year 1913. Sixteen happened in coal mines, 15 on steam railroads, three on street railroads, and one in manufacturing. These figures are necessarily incomplete because, among other things, and except for one case, they fail to show any of the numerous smaller accidents which did not result in loss of 30 days or more of time. Nevertheless they are quite sufficient, particularly if the six fatal accidents which occurred in the same year are added, to prove that *grave accidents occur in Springfield each year* and that these result in more than enough suffering and economic loss to call for serious endeavors in accident prevention.

ACCIDENT PREVENTION

Something like half of all industrial injuries, according to the 1910 report of the Illinois Employers' Liability Commission, are due to so-called "unavoidable" conditions in industry—injuries that appear to be very largely accidental and not of a kind to be easily anticipated. The other half are due to dangerous conditions which may be removed, or to carelessness on the part of workingmen which educational work regarding industrial hazards may greatly reduce. Most of the injuries in this second half can be prevented. That this is so has been demonstrated by many large corporations which have instituted thoroughgoing "safety first" campaigns. The Pennsylvania Railroad, for instance, by safety devices and instructions, has in recent years decreased serious accidents among its 33,000 shop employees 63 per cent. The United States Steel Corporation from 1906 to 1915 cut serious and fatal accidents to its employees 44 per cent. Up to the time of the survey, no energetic accident prevention campaign had been carried on in Springfield, either by employers individually or in groups, by labor organizations, or the community; and the field with all its possibilities remained largely virgin soil. As a consequence work accidents, in view of the usual proportion that are preventable, clearly caused many unnecessary injuries and deaths in the city and much needless suffering.

THE SPRINGFIELD SURVEY

REPORTING AND RECORDING ACCIDENTS

An important requisite for carrying on such a campaign is a knowledge of the facts regarding work accidents; how many there are, where they happen, why they happen, how they may be avoided. Unfortunately again adequate data on these questions were not available in the public prints or other records. The statutes of Illinois require the reporting of work accidents to state agencies, but the provisions of the statutes are confused and in some cases overlap, as their enumeration in the following table well indicates.

ILLINOIS STATUTES WHICH REQUIRE REPORTING OF WORK ACCIDENTS

Statute	Accidents must be reported which		Reports must be made to
	Occur in	Result in	
Accidents to employees act of 1907	Any employment	Death or loss of 30 or more days' time	Bureau of Labor Statistics
Health, comfort, and safety act of 1910	Factories, mercantile establishments, and workshops	Death or loss of 15 or more days' time	Chief factory inspector in lieu of other authorities
Mining act of 1911	Coal mines	Any injury	State mining inspector
Workingmen's compensation act of June 28, 1913	All establishments subject to the compensation law	Death or loss of a week's time	Industrial Board in lieu of other authorities save when public utility companies are concerned ^a
Public utilities act of June 30, 1913	Public utilities companies	Accidents which occasion the loss of life or limb	Public Utilities Commission

^aThe public utilities act became a law two days after the 1913 workmen's compensation law, and consequently the provision of the latter law, that reports made to it shall be in lieu of reports to other authorities, does not apply to reports required under the utilities act.

It is observed that under these statutes two establishments of exactly the same sort are often required to report to different authorities under different provisions. Moreover, coal mine

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operators not operating under the compensation law are compelled to report twice on each accident resulting in death or the loss of 30 or more days' time, one report being made to the mining inspector and one to the labor statistics bureau. Public utility companies also are required to make two reports, one to the Public Utilities Commission and one to either the Industrial Board or the Bureau of Labor Statistics, depending upon whether or not they come under the compensation law. Confusion is further added by the fact that state officers and agencies receiving reports do not compile them for the same periods or in the same manner.

It is impossible, therefore, to determine how many accidents happen in the state in any given year. It is even impossible to tell how many happen in factories, on railroads, or in bridge and building construction work. Moreover, only part of the data are presented by localities and the reports offer no help in getting an accurate idea of the number of work accidents which occur in Springfield or in any other city. With so great confusion and indefiniteness, one is led to wonder what the purpose of the compiled reports is. One of the first moves for efficient accident prevention work in Springfield and Illinois clearly should be to replace these confused and overlapping statutes by an act requiring the reporting of all work accidents to one central authority.*

ACCIDENT STUDY

The gathering of facts, however, which are not utilized will of course avail little in the way of safer conditions for workers. And in this particular, again, the situation is unfortunate; for the use made by the state of its facts on industrial accidents is ineffective. They are presented by the Bureau of Labor Statistics in 17 different forms in a book which contains almost nothing but statistical tables. Aside from two introductory pages and 18 pages at the back used in presenting the laws, less than three of the 360 pages are devoted to a discussion on the significance of the data or to deductions on policies to be pursued. The date, name, age,

* Such action has the endorsement also of the State efficiency and Economy Committee of the legislature, which included a similar recommendation in its recently issued report.

THE SPRINGFIELD SURVEY

occupation, residence, nativity, and cause of injury or similar facts are tabulated for each of 10,531 accident cases, but nowhere are vital points summarized and driven home by clear statement.

It is to be presumed that the data regarding industrial accidents are gathered so that the number of accidents and their causes may be known, and especially so that means for their



A SPRINGFIELD FOUNDRY

This foundry at the time of the survey showed poor housekeeping (always an accident hazard) and sanitary conveniences were defective. Emery wheels were without exhausts

prevention may be discovered, yet it is safe to say that no employer, in order to find out how to make his factory, mine, or railroad a safe place in which to work, has ever successfully consulted the report of the Bureau of Labor Statistics.

The Wisconsin Industrial Commission, to which work accidents are reported in that state,—and Wisconsin is much less an industrial state than Illinois,—has illustrated the use which may be

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made of such data. By analysis and study the commission has determined what are the more important causes of accidents, such, for example, as "objects striking workmen," "gear accidents," and so on; and has then published brief readable bulletins on each. The procedure is first to present a table of accidents due to the cause in question, and then by photographs and pointed discussion to explain how the dangers may be averted. Not only are these bulletins much less expensive to print than the voluminous tables of the Illinois report, but they are vital and helpful and the result is better care for the safety of industrial workers.

PROTECTIVE LEGISLATION

Besides the requirements for the reporting of accidents there is also direct legislation in Illinois to safeguard workers from dangerous work conditions. The salient points of these laws may be summarized as follows:

1. Laws Applying to Accident Prevention in Mines

1. All employes must be favorably passed upon by a state miners' examining board.
2. From each mine there must be two places of egress freely open for use and far enough apart to provide safety.
3. Shafts, cages, hoisting engines, passageways around cages, landings, and waiting places must be provided and safeguarded. The speed and use of cages are regulated and top and bottom operatives are required.
4. Boilers must be safeguarded as provided in law, and engine and boiler houses must not be built so as to jeopardize safe exits from mines.
5. Buildings within 100 feet of mine entrances must be fire-proof except for floors, windows, and doors. Oils and other inflammable materials must not be stored within 100 feet of mine entrances, explosives not within 500 feet.
6. Not less than two safety lamps must be provided in each mine. Their use must be safeguarded.
7. On haulage roads refuge places clear from obstruction must be provided for every 60 feet.

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8. Mine cars must meet certain requirements.
9. Exposed electric wires must not carry over 275 volts and must be safeguarded.
10. Oils used in mines must be stamped and tested and be kept in closed receptacles.
11. Explosives must not be stored in mines. Only limited amounts may be taken in and then under safeguards, their use being carefully regulated.
12. A certified mine examiner must examine conditions in every mine eight hours before each day's work begins.
13. The duties of hoisting engineers and other employes in so far as they relate to safety are specified in detail.
14. Walls 10 feet thick must be left between mines. There are special provisions as to the method of approaching abandoned workings.
15. Provision of stretchers and medical appliances is required.

II. *Laws Applying to Steam Railroads*

1. Every train must have an engine and enough cars with power-driven wheel brakes to give the engineer control over its speed without the use of hand brakes.
2. Automatic couplers are required.
3. Secure grab irons must be provided on the sides and ends of locomotives, tenders, and cars.
4. Draw bars must be of regulation height from the ground.

III. *Laws Applying to Buildings and Construction Work*

1. Scaffolding, cranes, ladders, etc., 20 feet above the ground must have proper safety rails.
2. Intermediate supports for joists, etc., must be sufficiently strong to sustain a load of 50 pounds per square foot. The sustaining power of all floors must be displayed on placards.
3. Safe temporary flooring must be maintained not less than two stories below the one to which the building has been erected.
4. Where elevating machines are used shafts must be enclosed by barriers eight feet high.
5. Signal systems must be provided for the protection of the operator of the hoisting engine and for workers above.

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IV. *Laws Applying to Factories, Mercantile Establishments, Mills, and Workshops*

1. All power-driven machinery, all projecting set screws on moving parts, all gearing, belting, shafting, fly wheels, all laundry machines, all electrical wiring systems, all dynamos, and all vats containing hot or corrosive fluids, must be properly enclosed.
2. Safeguards must not be removed, except for repairs.
3. An effective system for immediate disconnecting of power must be installed.
4. All hoistways, hatchways, and elevator wells must be properly fenced, and elevator cabs (freight and passenger) must be fitted with safety catches.
5. No employe may operate a machine with which he is unfamiliar.
6. Traversing carriage must not run within 18 inches of a fixed structure.
7. Substantial hand rails and safe treads are required on all stairways.
8. Proper lights are required in passageways, shafts, and elevators.
9. Floors must not be overloaded.
10. Passageways must be convenient and practical.

LACK OF ENFORCEMENT

Of these provisions, the mining laws are enforced by state and county mining inspectors; railroad safety laws by inspectors under the Railways and Warehouse Commission; bridge and building construction provisions by the local building inspectors and state factory inspectors; and enforcement of the safety and comfort act applying to factories, mercantile establishments, mills, and workshops is placed in the hands of the state factory inspectors.

The law providing for the inspection of safety devices on railroads authorizes the appointment of three inspectors, but only one of the three has been appointed. His report for 1913, for the extensive railroad state of Illinois, the last one issued up to the time of the survey, covers *three printed pages!* It shows the

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number of inspections made and the number of violations noted,* but fails to give the character of violations. It fails also to give the number of violations corrected, obviously a very important item. It mentions certain defects as being of a "penalty nature," but contains no record of penalties inflicted. Reports of



SAFETY APPLIANCES

Movable wooden ladders (illustrated by *A*) have been replaced in one Springfield factory by stationary iron ladders (*B* and *C*). The slipping or breaking of the former has been the source of many serious accidents in industry

inspectors should show not only inspections made and violations noted, but results obtained.

Of the work performed by the mining inspectors *no reports are*

* The report showed 18,239 cars and 302 locomotives inspected for safety appliances, 8,759 engines and cars tested for brakes, 31 accidents investigated. 1,262 cars and 20 locomotives were reported defective, 288 of the car defects "being of a penalty nature," and yet the matter is given a brief dismissal.

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issued. The annual coal reports of the State Mining Board, though they run over 275 pages and give detailed statistics regarding coal output, number of employes, days of operation, cost of mining, number of accidents, kegs of powder used for blasting, etc., contain no data regarding the number of violations found, orders issued, or prosecutions brought. *If there is one thing above all others which these reports should tell it is the nature and results of the work of the state and county mining inspectors in their most important function—the safeguarding of life in the dangerous occupation of mining.*

Judging from local accidents, the data contained in state reports, and the hazardous character of these occupations generally, accident prevention work in Springfield and the state needs especially to be centered upon railroads and coal mining. *It seems particularly unfortunate, therefore, that the work of the railway safety inspectors and mining inspectors is not better organized, more carefully checked up, and reported on from time to time.*

TABLE I.—ORDERS ISSUED BY ILLINOIS FACTORY INSPECTION DEPARTMENT AS A RESULT OF INSPECTIONS MADE IN SPRINGFIELD DURING THE YEAR ENDING MAY 31, 1914

Nature of orders	Orders issued
Correction of building defects	97
Correction of sanitation	87
Adjustment of power transmission	50
Guarding woodworking machinery	73
Guarding fly wheels	93
Guarding punch and stamp presses	19
Enclosing planer beds	18
Guarding gearing	208
Guarding belts and pulleys	523
Guarding sprocket wheels and chains	62
Guarding shafting	51
Guarding set screws	88
Guarding emery wheels	54
Guarding cranes	2
Total	1,425

At the time of the survey the last printed report of the chief state factory inspector, which was two years old, presented data

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for the years ending June 30, 1911 and 1912.* According to this report but one inspection to enforce the bridge and building construction safety law was made in Springfield in these two years, while no inspections were made to enforce the health, comfort, and safety act in factories, mercantile establishments, mills, and workshops. The chief factory inspector, however, supplied us the data regarding inspections in Springfield in the year ending May 31, 1914, and these showed much activity. Two hundred and fifty-two establishments were found to have unguarded machinery, fire hazards, or other dangerous conditions. For the correction of these 1,425 specific orders had been issued, details regarding which are shown in Table 1.

If vigorously enforced these orders should have had a marked result in rendering safer the lives of workers in Springfield manufacturing and mercantile establishments. Though the chief inspector reported that only 67 had complied before the end of that year,† safety provisions that have recently been made in a number of factories visited by the writer in connection with the survey field work indicated that many of the orders were not without results. On the other hand, unguarded fly wheels, planers, emery wheels, and belts in some establishments showed the need for vigorous follow-up work on the part of the state officers, while removed guards in one or two instances emphasized the need for reinspection. Most factory managers interviewed expressed their opinion that state inspectors followed up their orders with reasonable vigor, but in one case orders issued two years before had never been enforced. Such an incident should be made impossible.

CONSOLIDATION OF INSPECTION SERVICE

The Illinois Economy and Efficiency Committee appointed by the Forty-eighth General Assembly has already recommended consolidation of the numerous independent bodies dealing with labor conditions into a single Department of Labor and Mining,

* In the interval between the Survey field work and the publication of findings, later reports have been issued by the chief state factory inspector.

† Thirteen establishments for which orders were issued went out of business before the close of the year, thus reducing the number of orders outstanding but not complied with at the end of the year from 1,425 to 1,345.

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with bureaus in charge of special work. Such consolidation should make it possible to standardize the inspectional work and to secure better supervision over inspectors. This appears to us to be one of several very important first steps; few other single steps would do more to render effective the program of the state for the protection of the health and safety of employees—which, since Springfield is a railroad, mining, and manufacturing center, affects it so vitally. Save for minor difficulties in the working out of details, or the possible influence of office holders who might lose their jobs by reorganization, it is hard to see any ground for opposition to the recommendation. Both workers and employers of Springfield, as well as others interested in industrial betterment, will find the new plan to their and the public's advantage and should support it.*

VOLUNTARY SAFETY WORK BY EMPLOYERS

The state, however, should have no monopoly of accident prevention, and compliance with the orders of inspectors should not mark the limits of employers' efforts to provide safety for their workers in any communities. Provision of thoroughly safe working conditions, as already observed, is elementary in industry. This fact should be taken for granted in the same way that it is expected that offices and workshops will be kept warm enough for reasonable comfort while people are at work in them. It, moreover, offers opportunity to employers to gain the respect and goodwill of their employees—and this is an important matter, even economically. It is a pleasure to record that in a number of respects one Springfield factory has gone considerably beyond the law in its safety provisions, and is thus setting an example in these matters.

But no accident prevention campaign has ever been undertaken in Springfield, although a number of lives are sacrificed every year in industrial processes and numerous injuries occur, probably, as already observed, half of which with care might be averted. Large organizations, such as the United States Steel

* For a summary of the recommendations made in this report, which taken together form a plan for the reorganization of the separate industrial bodies of the state into a new Department of Labor and Mining, see pp. 144-147.

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Corporation, have demonstrated the possibilities of accident prevention by their "safety first" campaigns. And more recently safety campaigns are being attempted by the community. It has been found advantageous also for the employers of a city,



GUARDING DANGEROUS MACHINERY

The picture illustrates how without a guard a man's hand may be drawn under the spur wheel which feeds the board into the rip saw. This is a common accident. It may be prevented by a simple guard, which was provided in this case but removed for the purpose of illustration. A fully guarded machine was seen in the Racine-Sattley factory, Springfield, the guards including a device to prevent the boards from kicking back upon the worker. No exhaust was provided, however, for the sawdust, which is seen in large quantity under the machine.

Rip sawing is one of the most dangerous operations among those where wood-working tools are used, not only because of the numerous injuries to fingers by the saw, but because the board is often thrown from the saw, and usually comes with bullet-like speed

particularly those engaged in similar industries, to work together to this end. In the educational work of accident prevention especially, a "safety first" committee of the Commercial Association, by securing experts to speak before the association, by aiding employers with information, by preparing danger cards

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for use by employers in hazardous places, and by conducting general publicity campaigns on accident prevention, could help substantially in lowering the accident dangers. In the long run, however, much of the responsibility must go back to the individual employer who largely determines conditions in his own establishment. To meet this responsibility a number of practical suggestions to managers of industrial plants are offered:

1. The study of accident prevention methods already worked out—particularly those made use of in similar lines of business.*

2. The inspection of premises periodically with a view to discovering dangerous conditions.

3. The encouragement of employes in reporting such conditions. In larger shops safety committees among workers have proved of value.†

4. The removal of all dangerous conditions as far as possible.

5. Where such conditions are inherent in industrial processes all employes, particularly new men, should be given detailed instructions regarding the conditions and warning signs should be posted in dangerous places.

6. Employes should be continually impressed with the need for caution and the use of safety devices should be insisted upon.

Effective safety work by employers and reorganized and improved state supervisory service should be demanded by the people of the community.

* A number of helpful publications on the prevention of industrial accidents are:

Calder, John: *The Prevention of Factory Accidents*. New York, Longmans, 1899.

Schwedtmann, F. C., and Emery, J. A.: *Accident Prevention and Relief*. New York, National Association of Manufacturers of U. S. of America, 1911.

Price, George M.: *The Modern Factory*. New York, Wiley, 1914.

Tolman, W. H.: *Safety*. New York, Harper, 1913.

Bulletins of the Industrial Commission of Wisconsin, Madison, Wis.

These are designed to be especially helpful in a practical way to employers. Those issued to date are on ways to prevent jointer accidents, eye injuries, metal burns, infections, accidents caused by objects striking workmen, and gear accidents. Bulletins on "Shop Organization for Safety," "Safety Orders," "Industrial Accidents," "Elevators," and "Laundries" will also be of value to employers.

† The National Cash Register Company, after accident prevention work by the company had been vigorously prosecuted for years, in one year, through the organization of safety committees among its employes, reduced time lost through accidents 36 per cent.

See also footnote, p. 149.

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FIRE HAZARD

Fire hazard in industrial establishments arises from one or more of three conditions:

- (a) Neglect to eliminate possible sources of the start or spread of fires;
- (b) neglect to provide adequate fire fighting facilities; and
- (c) neglect to provide adequate means of egress for workers.

Some of the factories visited in Springfield showed efforts to minimize fire hazards; in others, however, no such efforts were apparent. One large establishment at the time of the survey investigations was strewn with boxes, excelsior and other waste, thus greatly increasing the fire risk, while signs prohibiting smoking for the most part were conspicuously absent from all establishments. Similarly, in a number of establishments inspected there were no fire buckets, hose, extinguishers, nor other fire-fighting apparatus, though a few had installed sprinkler systems or provided fire-fighting apparatus of other sorts.

From the standpoint of the workers' safety the provision of adequate egress is of greatest importance. Most Springfield factories are but two stories high, so that danger to life through fire is minimized. In two out of the 10 factories inspected, however, egress facilities were insufficient. From the two top stories of one four-story brick building, entirely of wood construction within, the only means of egress was down a flight of wooden stairs or down an elevator with an open shaft, both situated close together. Fortunately the two upper floors were used mainly for storage purposes and so not many lives were jeopardized by the lack of emergency means of escape.

At the second establishment fully 500 persons, many of them women, worked on the second and third floors. The building is three stories high and has several wings which converge on a single wooden stairway about eight feet wide. Even under ordinary conditions, when workers passed out, the congestion was so great that the management let women go first before ringing the closing bell for men employees. While the factory was protected from spread of fire by an automatic sprinkler system, the danger of panic was great and it was entirely possible

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that escape down the stairway might be cut off. And panic even in cases where the buildings are low is one of the most deadly factors in fire hazards. The only fire-escapes on the building were antiquated ladders without platforms which did not reach nearer than 12 feet from the ground and which would be almost useless in case of fire. A modern stair fire-escape at the end of each wing of the building is clearly needed; but too much reliance should not be placed even upon these, for some of the recent factory fires have raised serious doubts as to the adequacy of protection afforded by outside fire-escapes—particularly where the fire-escapes must be near windows. A better plan is to put the fire-escape inside the building and wall it off completely from the rest of the factory. On a third building, two stories high, of brick-wood construction, in which many women were employed, the management, previous to our visit, at the suggestion of the factory inspector, had ordered the construction of a fire-escape.

PUBLIC REGULATION OF HAZARDOUS CONDITIONS

The fact that fire hazard is not greater in Springfield is not due, however, in any great degree to public regulation, for the legislation on the subject is faulty and inadequate. The few regulations are contained in two state statutes. The first provides that buildings over two stories high which are used for manufacturing purposes must be equipped with one fire-escape (of a type to be determined by the local government) for every 50 persons working above the second floor. This, of course, is good as far as it goes; but enforcement is left to the sheriff and the grand jury, neither of whom ever inspects factories. Moreover, the local government, as far as we were able to learn, has never determined the type of fire-escapes which would be acceptable and safe.

The second statute provides (a) that all factories, mercantile establishments, mills, and workshops must have "sufficient and reasonable means of escape" in case of fire; and (b) if the establishments occupy buildings two or more stories high, that all doors must open outward. This law is enforced by the state factory inspection department, which periodically inspects the

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establishments to which the law relates. The provision for "sufficient and reasonable means for escape," however, allows too much room for disagreement over interpretations to permit effective enforcement, though by the exercise of tact, inspectors are doubtless able to accomplish a good deal. This is a case where the conditions to be dealt with are subject to sufficient classification to make definite stipulations workable.

Finally, besides these state laws, there is a city ordinance in Springfield enacted many years ago which requires on buildings used for manufacturing purposes one fire-escape to every 25 persons employed above the second story. The type of escape is to be determined by the mayor, the fire marshal, and the chairmen of the committees on fire and water and on public grounds and buildings. Under the new commission government charter the last two officials no longer exist. Enforcement of this ordinance is now in the hands of the police, which, until the police in general, and those of Springfield in particular, take a broader view as to what constitutes their work, means no enforcement at all. It is safe to say that neither this ordinance nor the state law which is supposed to be enforced by the sheriff had, at least up to the time of the survey, ever resulted in the erection of a single fire-escape on a Springfield factory.

But even if these laws fully and satisfactorily secured the objects they aim at, they still fail to make all the provisions which within reason are needed for the protection of factory workers. They contain no provisions whatever for the elimination of conditions which cause fires or result in their spread, and they make no requirements of the employers for fire-fighting facilities, much less for approved facilities. Even in the field which the law aims to cover—the provision of adequate egress for workers—there are no requirements for fire alarm signals or fire drills.

In Springfield, with few large factories, the results from this inadequate legislation may not have been specially serious, but as has been seen in one factory containing many employes a dangerous fire hazard nevertheless exists. Moreover, as has been pointed out, Springfield is growing as a manufacturing center, and each year the importance of proper protection in-

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creases. Provision should not be delayed until some holocaust shocks the public to action. Besides, in Chicago and other parts of the state (for in matters of state legislation at least Springfield cannot disengage itself from the whole state) where in



THE BINGHAMTON FACTORY FIRE

This fire in a four-story building in Binghamton, N. Y., in which over 100 workers were clustered on the top floor, cost the lives of over 50 persons. Reports on the fire state that the exits were inadequate in number, size, and structure to empty the building in the two or three minutes before the flames had turned it into a furnace.

Some effort to eliminate possible sources of the start and spread of fires and to provide adequate fire-fighting facilities were observed in some Springfield factories, but this could not be said of all. Provision of adequate egress had not been sufficiently looked after in a number of establishments. A tragedy as horrible as that in Binghamton could occur in one of Springfield's factories at any time

many factories large numbers of workers are crowded into upper stories the dangers due to this defective legislation must be exceedingly great. It is our judgment that the state factory inspection department of Illinois should give the matter careful

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attention and after thorough investigation recommend to the legislature adequate provisions for the protection from fire dangers of workers in factories and mercantile establishments.

Thus far New York state seems to have the best law covering this subject, and while the New York law falls short of some things that may be desired, and while differing conditions may render it not entirely applicable to Illinois, it nevertheless offers valuable suggestions. Some of its more important provisions* are:

Construction Requirements Relating to Existing Buildings

1. Two exits remote from each other must be provided on each floor.
2. With few specified exceptions stairways and elevator shafts in all buildings in which more than 25 persons are employed above the second floor must be enclosed by fire-resisting materials.
3. Doors must open outward.
4. Modern fire-escapes and fireproof windows or doors leading to them must be provided.

Construction Requirements Relating to Buildings Erected After Enactment of the Law

1. Fireproof construction for all buildings over four stories is required.
2. The numbers and kinds of exits from given floor areas are fixed.
3. All stairways must be of non-combustible materials and of a width and kind specified.
4. All doors must open outward.
5. Elevator shafts and other openings must be of fireproof construction.
6. Automatic sprinklers are required in certain factories.

General Provisions

1. Factory buildings over two stories high in which over 25 persons are employed above the ground floor must have a fire-alarm system and hold fire drills once a month.
2. Fireproof receptacles for waste must be provided and refuse matter must not be allowed to accumulate.
3. Gas jets must be enclosed in wire cages.
4. Smoking in factories is prohibited.

This New York legislation is the outgrowth of the Triangle Fire, in a ten-story building, which early in 1911 cost the lives of

* U. S. Bureau of Labor Statistics. Labor Laws of the United States, Pt. II. Bulletin 148. Washington, 1914, p. 1496 ff. Labor Legislation of 1915, Bulletin 186. Washington, 1916, pp. 255-6.

New York State Industrial Commission. The Bulletin. 1916, p. 5.

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146 workers, mainly girls, and of the Binghamton fire, in a three-story building in 1913, which demanded a toll of over 50 lives. It is hoped that Illinois will not wait for factory fires as serious as these in New York, or even less serious fires, to make it pass and enforce adequate laws to protect its industrial workers. A tragedy as horrible as that in Binghamton, a city no larger than Springfield, might occur in one of Springfield's factories at any time.

OCCUPATIONAL DISEASES

Specific physical ailments arising out of work conditions have long been recognized. Lead poisoning has been fairly common among painters, printers, and other persons who in their work processes have had to handle lead. Other well-known forms of industrial diseases are mercurial and arsenic poisoning, "zinc chills," and "phossy jaw." It is only in recent years, however, that the extent to which industrial conditions affect health has begun to gain recognition. The tendency now is to study not only those ailments distinctly recognized as occupational, but all health hazards in an industry or an establishment whether the effect be direct as in arsenic poisoning, or indirect as in tuberculosis, or pneumonia, or other diseases, which gain power in proportion as the vitality of the workman may be lowered by the conditions of his environment.

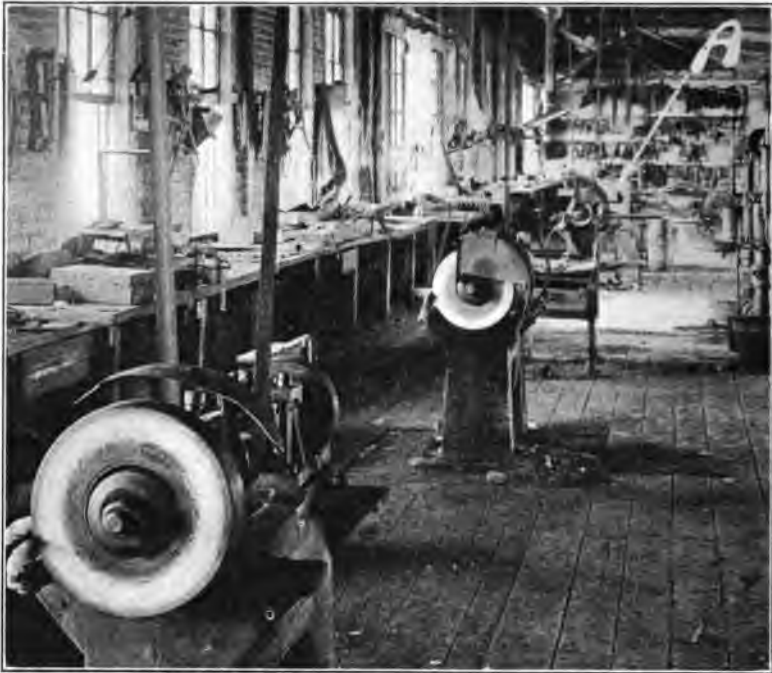
State commissions in three states—Illinois, New York, and Ohio—within the past five years have been studying the subject. The report of the Illinois Occupational Disease Commission, issued in 1911, on the basis of which the Illinois occupational disease law was enacted, made important contributions to scientific knowledge on the subject.

Conditions which the Illinois commission, in agreement with the views of others who have given the matter most careful attention, mentions as important causes of occupational diseases may be enumerated as follows:

1. Vitiating of air with irritating or poisonous dust.
2. Vitiating of air with irritating or poisonous fumes.
3. Direct contact of workers with irritating and poisonous substances affecting the skin and producing eruptions.

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4. Extremes of heat and cold.
5. Extremes of dryness and humidity.
6. Defects in lighting.
7. Abnormal atmospheric pressure.



EMERY WHEELS WITHOUT EXHAUSTS

Workroom in a Springfield factory. Except for the wheel at the farther end labeled A, none of these wheels was provided with an exhaust. The state law of Illinois since 1897 has required exhausts on emery wheels. The fact that seventeen years later many such wheels without exhausts were found in Springfield is a severe commentary upon labor law enforcement in this community

8. Jarring, shaking, and deafening noise.
9. Overstrain, fatigue, hurtful postures, and over-exercise of parts of the body.

A number of these conditions are found in greater or less degree in occupations carried on in Springfield. In some cases they

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are inherent in industrial processes and their bad effects can only be minimized, unless indeed the effects are so serious as to warrant discontinuing the industry itself*; in others they appear entirely removable.

Few processes are carried on which do not generate some dust, the general effect of which, particularly when of metallic and mineral origin, is to clog and injure the respiratory organs and weaken resistance against diseases affecting them. Death rates of persons engaged in dusty trades are, therefore, notably high—especially from diseases of the respiratory organs. In Springfield the workers particularly exposed to occupational dusts are metal polishers and grinders, printers, compositors, pressmen and engravers, foundrymen and zinc workers, stone and marble workers, plasterers, cement workers, paper hangers, lithographers, moulders, core-makers, coal miners, flour mill workers, woodworkers, and shoe and shoddy factory workers.

The dust perhaps most injurious to the respiratory organs is that formed of sharp particles thrown off by metal polishing and grinding wheels. The danger in this case was recognized in Illinois as early as 1897, when a law was passed requiring exhausts on all metal polishing machinery used for dry grinding. The fact that 17 years after the enactment of this law we found in Springfield a number of emery wheels used for dry grinding, which had no such exhausts, is a severe commentary upon the weakness of labor law enforcement in this community. We encountered a man during the course of our investigations who after 14 years' service as a metal polisher in a Springfield factory which provides no blowers on its emery wheels had been forced to give up his work because it had undermined his health.

Printing trade workers are frequently exposed to dusts containing lead particles, which beside having the bad effects of dusts in general often result in lead poisoning. Fortunately, however, "all the risks to health to which the printer is exposed are avoid-

* On July 1, 1913, a federal law took effect in the United States which placed a prohibitive tax upon the manufacture of poisonous white or yellow phosphorus matches. This is an illustration of state action, which practically prohibits an industry in which the workers have suffered from a very serious industrial disease known as "phossy jaw." Thereafter it has been necessary to eliminate the poisonous element of white phosphorus in the manufacture of matches.

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able" by the use of care and cleanliness, states the report of the Illinois Occupational Disease Commission already referred to.

Another group of workers exposed to lead poisoning are the painters. The Illinois commission found more cases among



EXHAUST ON EMERY WHEEL

The view was taken in the grinding shop of the Springfield factory of the Racine-Sattley Company. The machine at the left is used in polishing plow bottoms, the part to be polished being placed on the cradle shown at A and rocked back and forth beneath the polishing wheel. At B is shown a heavy sheet metal guard over the wheel to protect the operator from flying sparks and also to deflect the dust downward toward the dust-collecting hood. Figure C is a sheet metal guard over belt.

To the right at D can be seen the large fan used for removing dust from grinding operations and exhausting it into an overhead dust collector. The suction passage leading to the left from the fan goes to the various wheels and is shown at E and extends along the entire wall. At each wheel is a dust-collecting hood F, which is so arranged to deflect the rising dust into E, through a hole shown in the center of the hood

them than among persons engaged in any other trade. Two cases of painters poisoned by lead in Springfield were discovered during the course of our own investigations, which necessarily covered only a small proportion of the workers in the trade.

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The dangers to painters arise through paint being carried by the fingers to the mouth, from inhaling the dust which is formed by the mixing of dry white or red lead, or from dust released in the dry rubbing down of white lead paint. Care and cleanliness may minimize the first and second danger, but the third can be eliminated only by substitution of zinc for lead paint, by the



A WEEK'S DUST FROM EMERY WHEELS

Nine barrels of metal dust gathered in one week by emery wheel exhausts in the factory of the National Cash Register Company, Dayton, Ohio. The size of the pile emphasizes the importance of efforts to keep the dust out of the air breathed by workers

abolition of dry rubbing, or by the use of suction fans, respirators, and other unusual precautions to prevent the inhalation of lead dust.*

Two workers in a Springfield factory where to a small extent mercury is used were found recently to be suffering from mercurial

* Employers and employees in both the printing and painting trades will do well to consult the Illinois Occupational Disease Commission's report on lead poisoning to discover in detail possible preventive methods.

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poisoning due, according to the employer, to disobedience of orders regarding its handling. There is not much work in Springfield, however, which involves the handling of mercury; and there is promise in the fact that since new warnings have been given in the case of the two workmen the trouble has not been repeated.

The production of zinc, in which our figures show 175 men to be engaged in Springfield, is recognized as involving special hazards. Workers are subject to zinc chills, lead poisoning (zinc ore contains a small per cent of lead), and to a form of colic. It is also claimed that they are unusually subject to bronchial troubles.* These dangers are thought to result from inhalation of zinc smoke which arises in the processes of manufacture.

Besides being exposed to these fumes, workers about zinc furnaces are also exposed to excessive heat. The same is true of stokers for different industrial and power plants, of foundrymen, of iron workers in other plants, and of some laundry workers. The Springfield Light, Heat and Power Company has its stokers work in two-hour shifts—one method for eliminating fatigue from excessive heat. Another way is through the installation of mechanical fans.

BAD LIGHTING AND NOISE

For a few of the processes in the Springfield factories visited, the lighting was inadequate. In a good many other processes it was adequate in amount, but workers were forced to face the glare of windows or of artificial lights. Lights should not only be adequate in amount, but should, whenever possible, come from the left of the workers, particularly in cases where the worker is doing careful work with his right hand. In case artificial illumination is resorted to shades should protect the eyes. Good lighting protects employes from eye strain, reduces the number of industrial accidents, and leads to increased production.† Effi-

* See Illinois Occupational Disease Commission report, pp. 73-79.

† The Traveler's Insurance Company is sponsor for the statement: "It is generally estimated that 25 per cent of the avoidable accidents are due directly to poor lighting." Further, the United States commissioner of labor is authority for the fact that in the iron and steel industry, other conditions being essentially the same, accidents in the mechanical department at night exceed those in the day by 118.3 per cent, while night accidents in the yards exceed day ones by 127.6 per cent. The excess of night over day accidents he attributes mainly to inferior light.

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ciency engineers insist upon it not from humanitarian motives, although the case would be strong on that basis, but because it pays in dollars and cents. "Available data show," says C. L. Eshleman in a paper recently published in the proceedings of the American Institute of Electrical Engineers, "that an efficient lighting system increases the output from 2 per cent in steel



FACTORY LIGHTING

This factory has a large amount of window space and the amount of light is thoroughly adequate. Work-benches are arranged, however, so that the workers face the light squarely, a plan which is opposed by lighting experts. A number of Springfield factories have not only an improper arrangement of work-benches but insufficient light as well

mills to 10 per cent in textile mills and shoe factories." Fred Schwarze, electrical engineer, who prepared the bulletin of the Wisconsin Industrial Commission on shop lighting, relates the experience of a steel plant which installed an efficient lighting system, with the result that the output at night was increased over 10 per cent. In order to determine if the increase was due entirely to lighting, work for a time was carried on under the old

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system. The output fell off 10 per cent. In view of such experiences, there seems to be the extra reason of increased efficiency for urging those whose plants are inadequately lighted to make improvements that will conserve the eyesight of their employes.

As is the case of men engaged in similar occupations elsewhere, boiler makers and locomotive engineers and firemen in Springfield are subject to excessive noises, the tendency of which is to impair the hearing.* It is, however, a difficult condition to remedy, and calls for study and the application of inventive genius.

OVERSTRAIN

Injuries due to overstrain, fatigue, hurtful postures, or over-exercise of parts of the body in the past have seldom been recognized as of industrial origin. Indeed it is only the careful and thorough physician who even today traces such injuries to their source. Investigation, however, has been making increasingly evident the industrial origin of many physical breakdowns. Fatigue is cumulative, and unless after each day's labor a worker has an opportunity to recover completely, its increase from day to day must finally result in breakdown. Particularly are women subject to fatigue, and on the basis of this fact Illinois and other states have enacted laws restricting their hours of work. The Illinois law, however, as will be seen more fully later, is less stringent than the laws of the other great manufacturing states, for it permits work up to 10 hours a day and places no restriction upon night work nor upon weekly hours—which may even run as high as 70.

Women are also particularly subject to injury from hurtful posture—especially long-continued standing while at work. In the briefs submitted in defense of restricting the hours of work of women, Josephine Goldmark brings together evidence of the effect of long standing,—varicose veins, flat foot, derangement of uterine functions, uterine displacements, and general nervous

* For information on effect of noise on workers see report of Drs. E. Shambaugh and G. W. Boot on Occupational Deafness, in the Illinois Occupational Disease Commission Report of 1911.

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debility.* To these dangers women and girls were subjected in many Springfield establishments. *In the shoe factory, for example, practically all women workers except the operators stand 10 hours a day pasting, cutting, inspecting, or packing.* The cutting is done on machines placed on a table which is too high to permit workers to operate them when seated on chairs of the



SEATED AND TENDING A SERIES OF MACHINES

This ingenious device, developed by the Illinois Watch Company, disproves the contention that workers tending a series of machines must of necessity stand while at work. Indeed, it seems probable that the efficiency of these women workers is increased by these chair platforms which are mounted on ball-bearing wheels running on tracks along the work-benches

usual height—and *there were no seats specially adapted for this work.* A girl who pasted and glued by hand was obliged to stand, as no seat was provided, although she herself thought she could do the work perfectly well if seated. The absence of seats in

* Goldmark, Josephine: *Fatigue and Efficiency*, p. 135 ff. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1912.

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these cases is most intolerable; for the work is adaptable to a sitting position. In a large shoe factory in Brooklyn the writer recently observed all the pasters seated while at work and apparently performing their tasks to the satisfaction of the management.

An interesting contrivance at the Illinois Watch Factory well illustrates the feasibility of providing seats for workers in tasks which it would seem at first glance could be performed only when standing. Chairs have been fastened to platforms mounted on ball-bearing wheels which move along tracks. By means of this contrivance, which allows quick and easy movement between machines, workers are able to feed a series of machines while remaining seated. Indeed it seems probable that their effectiveness is even greater than if the workers were required to stand. This device is an object lesson for all factories in which workers are required to stand for the supposedly sufficient reason that they must feed a series of machines!

Women laundry workers in Springfield, almost without exception, stand at their work, although tradition in many cases constitutes the main reason that many are required to do so. Their hours are 10 per day, and for this period day after day they are required to stand shaking damp clothes, feeding flat work into steaming mangles, folding finished sheets and other articles, ironing, and even washing. Every woman laundry worker interviewed complained of tired and sore feet, although a few who had worked for many years in the trade stated that they had become accustomed to both the standing and the pain. One manager claimed that at some tasks it was not practicable for workers to sit and that the women got used to standing and even preferred it. Over against the illustrative case he cited, in which a woman preferred to stand while working at a mangle, are such records as that of a Springfield girl of eighteen, found by the survey investigators, who worked at a similar task. She stated that her feet were often so tired and swollen that in the morning, even after the night's rest, she sometimes cried with pain when attempting to put on her shoes. Two other young women, sisters, were so exhausted at the end of the day's work in the laundry that they went to bed as soon as they had supper. Another, a marker,

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said that she could probably do her work as well if she were seated, but that since there were no seats she had never been given a chance to try the experiment.

The provision of seats was also inadequate for store employes. Visits to six of the leading department stores and five-and-ten-cent stores of the city on a Saturday evening showed in all but one establishment almost a total lack of seats. In one five-and-ten-cent store narrow seats were constructed against the rear of the counters for the use of the girls. In one department store three boxes were found behind the counters, but no other seats of any kind could be discovered. Evidence from the women and girls themselves showed that these conditions were not unusual. A girl of twenty-one, working in a store where no seats were provided, said she never had a chance to sit or rest during her nine or 10 hour day unless she went to the dressing room, where there was a couch. Another girl of sixteen years, earning \$5.00 a week, testified that not only were no seats provided in the store where she was employed, *but that the girls were not even allowed to sit on boxes left behind the counters.*

These conditions exist in spite of the fact that working women in Illinois since 1910 have supposedly been protected from long hours of standing by a law which not only requires "a reasonable number of suitable seats" in factories and mercantile establishments, but also provides that employers shall permit the use of such seats by women workers "when they are not necessarily engaged in the active duties for which they are employed" and "when such use would not actually and necessarily interfere with the proper discharge of their duties."

Obviously the provisions of this law are unfortunately vague—so vague as to render the law of only limited value. In most factories the work is continuous. In the tasks of women workers in shoe factories, for instance, there are few pauses when the workers are not "engaged in the active duties for which they are employed" and may legally demand the right to be seated. Even women and girls employed in stores and other places where processes are not so continuous are not protected from long standing, for there is an endless diversity of opinion as to what constitutes a "reasonable number of suitable seats." Are the

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Courtesy United States Bureau of Labor Statistics

SEATED WHILE AT LAUNDRY WORK

The picture shows a worker operating a body ironer equipped with pneumatic treadle device. Only a slight pressure of the foot is required to operate the device, as power for ironing pressure is supplied by compressed air. The machine is equipped with two sets of treadles so that the operator may sit or stand while at work.

Machines of this or similar type, however, were not found in the Springfield laundries. Women laundry workers in the city almost without exception were obliged to stand at their work. An Illinois law supposedly protecting working women from long hours of standing in factories and mercantile establishments is so vague as to render it of only limited value. Moreover it does not apply to all occupations. More definite provisions are needed.

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three boxes, for example, which furnished the only resting places on the main floor of one store, "seats" within the terms of the law and are they a "suitable number" for from 20 to 30 female employes?*

In the eyes of one employer at least they seemed to be; and apparently his view had not been challenged by the state factory inspection department. *Women laundry workers, moreover, are not included within the act.*

From the foregoing it is evident that there is need of more adequate legislation to protect women workers from the dangers of long hours of standing. *Ohio since 1911 has required a suitable seat, including a back, for each female worker employed.* This law, applying to all establishments employing girls and women, has stood the test of reasonableness for over four years in an important manufacturing state. Springfield conditions indicated the need of a similar statute in the state of Illinois.

Even the best law, however, cannot insure women workers against long hours of standing; for certain employers, while furnishing seats to show apparent compliance with the law, do not permit their use. This was the condition in two of Springfield's five-and-ten-cent stores where, according to the sales girls, the managers prohibited the use of the seats which had been furnished, or "criticized girls who used them." Such subterfuge is difficult, if not impossible, for labor inspectors to prove, but can be eliminated if the public will note and patronize only those stores which not only provide seats but allow their use.

OTHER LEGAL PROVISIONS

The requirement of a reasonable number of suitable seats, above quoted, is contained in the 1910 health, comfort and safety act. Other provisions of this statute designed to protect the health of employes may be summarized as follows:

1. Food shall not be taken into any room where white lead, arsenic, or other poisonous substances are present.
2. Temperature and humidity must be of a degree not to jeopardize the health of employes.

* For a discussion of a similar work problem in Baltimore, see Butler, Elizabeth B.: *Saleswomen in Mercantile Stores*, pp. 19-30. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1912.

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3. The amount of air space and means for ventilation must meet certain standards.

4. Premises must be free from poisonous gases and injurious dusts.

5. The cleaning of factories and the protection of workers in wet processes must meet fixed standards.

6. An adequate number of water-closets for each sex is required.

7. Wash rooms must be provided; also dressing rooms in industries where, through custom or necessity, workers need to change their clothes.

Beside these regulations which apply to all factories, mercantile establishments, mills, and workshops the 1911 occupational disease law lays down additional requirements for industries in which special health hazards exist. The general provisions of the law* are:

1. Employers must provide without cost to employees suitable working clothes.

2. Employees exposed in dangerous processes must be examined monthly by a physician, who must report to the state board of health.

3. Lockers, dressing rooms, washing facilities, clean towels, soap, and shower baths must be provided.

4. Employees are prohibited from taking food into the work-room.

5. Poisonous fumes must be carried off by adequate devices.

6. Dry sweeping is not permitted during working hours.

7. Hoppers and chutes must be inclosed in hoods and all conveyances and receptacles must be properly covered.

It is to be expected, as the nature and causes of occupational diseases become better known, that provision for the protection of the workers will be further extended. When this is done we believe that Illinois will find it advantageous (and it is here recommended), instead of enacting detailed regulations for each industry, applying to varying conditions that do not admit of clear classification, *to pass a general statute and create a board in the labor department to confer with employers and employees in mak-*

* U. S. Bureau of Labor Statistics. Labor Laws of the United States. Pt. I. Bulletin 148. Washington, 1914. Pp. 588-591.

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ing special rules to fit each case. In other words, we recommend that Illinois create an Industrial Commission to take charge of these questions, the commission to be a part of the reorganized state Department of Labor and Mining, already urged in this report, and to be further outlined in later sections.*

This plan has proved satisfactory in Wisconsin and has been adopted in New York and Pennsylvania. On the whole, it seems to promise better results than for the legislature to attempt to pass specific regulations governing specific conditions which if fully covered in each industry are multitudinous.

COMPENSATION FOR INDUSTRIAL INJURIES

Closely related to the question of health hazards in industry is the matter of compensation for injured workmen. Up to 1910, in Illinois and the other states of the Union, a workman injured in the course of his employment, unless settlement between his employer and himself could be reached by agreement, could recover damages, if at all, only after extended and expensive litigation. If he did get a favorable verdict, the sums awarded were very largely reduced by attorneys' fees and other expenses. Moreover, out of every dollar employers paid to insurance companies to cover their accident risks, less than 37 cents ever reached injured workmen.† And a large proportion of the latter, some of them permanently incapacitated, received no damages at all; unless their relatives looked after them they were forced into dependence upon public or private charity.

Many states, dissatisfied with the extravagance and injustice of these conditions, appointed commissions to investigate. The results of practically all of the inquiries showed that about 50 per cent of all industrial accidents occurred from faults chargeable neither to the employer nor to the injured employee‡ and that when an employe in the course of his work suffered an injury falling within this class he had no redress whatever. As a result of

* For a summarizing of the recommendations relating to the proposed re-organization of the various state industrial bodies see pp. 144-147.

† Eastman, Crystal: *Work-Accidents and the Law*, pp. 288-292. (The Pittsburgh Survey.) Russell Sage Foundation Publication. New York, Charities Publication Committee, 1910.

‡ Report of Illinois Employers' Liability Commission, 1910, p. 9.

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these investigations 31 states, Illinois among them, in the years 1910 to 1916 enacted workmen's compensation laws.*

The general provisions of the Illinois act are as follows:

1. *The law is optional.* Employers in most industries, unless they file petitions indicating their desire to be subject to it, do not come under the law. Employers in certain occupations considered extra hazardous, such as coal mining and railroading, however, come under the law automatically unless they file petitions which will exempt them from its provisions.

2. Employers electing not to pay compensation according to the provisions of the law lose the three traditional common law defenses against the award of damages: (a) that the employe assumed the risk, (b) that the injury was due to negligence of a fellow employe, and (c) that the injury was due to contributory negligence on the part of the employe.

3. In cases of death, compensation ranges from \$1,500 to four times the annual earnings of the injured employe—but not less than \$1,500. For non-fatal accidents lump sums are paid, according to the nature of the injuries, in addition to payments of from \$5.00 to \$12 a week while employes are out of work. For permanent injuries provision is made for annual pensions which in no case amount to less than \$10 a month. Employers pay hospital bills up to \$200.

4. In case of disagreement over the amount of compensation settlement is made by three arbitrators, one representing each of the interested parties and one representing the Industrial Board which has charge of the administration of the law.

The Industrial Board in one of its bulletins has outlined the purpose for which this law was supposedly enacted. "The basic principle of compensation laws," the statement runs, "is that the industry, rather than the individual workman or employer, should bear the inevitable hazards of production; and the great object to be accomplished is to afford without litigation, if possible, prompt and specific compensation for industrial injury." Accepting this as the underlying purpose of compensa-

* U. S. Bureau of Labor Statistics. Compensation Legislation of 1914 and 1915. Bulletin 185. Washington, 1916. P. 6.

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tion laws, it clearly appears that the Illinois statute is lacking at several points.

In the first place it is an optional law, and the principle that industry should bear its inevitable hazards is established to only a limited extent. Employes without exception have chosen to come under the law's provisions; *but many employers, especially in the most hazardous industries, have elected to be exempt.* In coal mining, for instance, where accident risks are unusually great, employers have for the most part petitioned for exemption. Twenty-two out of 33 Sangamon County coal mines had filed such petitions prior to May, 1914. Steam railroads, on which accidents are also frequent, have likewise exempted themselves from the law's provisions. *Of the six steam railroads running into Springfield not one has come under the law.*

Thus of the more limited group of employers who come under the law unless they file exemptions 42 had elected not to pay compensation according to its provisions, while up to May, 1914, of the great majority of other Springfield employers who would be exempt from the law unless filing papers to come under it only 36 had elected to pay compensation according to its provisions. It is evident, therefore, that the great majority of Springfield workers, especially those engaged in the more hazardous industries, are employed in places where the basic principle of compensation laws has not yet been established.

In another way also the law is deficient. Health hazards in industry, as we have seen, may result not only in accidents but in disease. In spite of our relatively limited knowledge of industrial diseases many are clearly recognizable. The law, however, covers only injuries resulting from accident. The burden of industrial disease injuries must still be borne by the injured employe and his family. Thus for a second reason the law fails to establish the basic principle of compensation laws as outlined by the Illinois Industrial Board. We realize, of course, that it is a debatable question whether occupational disease should be included with accidents in the workmen's compensation law, or whether its burdens, like those of any other sickness, should be distributed by means of state health insurance. In the absence of a health insurance law, however, it would seem clear that the

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workman who is poisoned by the materials of his work should be compensated as he would be if he were injured by his machine. And in order to prepare for a more adequate treatment of the problem later, it is recommended that the legislature appoint a commission to study and report on the question of state health insurance.*

Finally, even where operative, the law does not in all cases eliminate the drain of lawyers' fees upon the compensation received by injured workmen. Out of about 14,000 accident cases compensated for under the law up to May, 1914, agreement as to the amount of compensation due could not be reached in some 600 cases. In such instances, according to the provisions of the law, settlement is made by three arbitrators, one chosen by the injured workman, one by the employer, and one by the Industrial Board. In hearings before these arbitrators the Industrial Board has sanctioned the appearance of attorneys. Complex legal questions are not involved in these cases and it would seem that the arbitrator appointed by the board, who holds the balance of power, should be able to see that each side gets a full and fair hearing. If this were done the total amount of the compensation award could be conserved for the injured workmen.

In spite of this difficulty in administration and the weakness in the law itself, the fact remains that its enactment marked a distinct step forward. Its great accomplishment, however, has not been the establishment of workmen's compensation, but the elimination of the "assumption of risk," "fellow servant," and "contributory negligence" defenses against the recovery of damages by injured workmen. In wiping out these traditional and oftentimes cruel common law defenses the statute has been of real advantage to the working people, and indirectly to the community. *Nevertheless the conclusion remains clear that the workmen of Springfield and the state of Illinois must still look to the future for a real compensation law which shall establish the principle*

* For a presentation of European experience in insurance against industrial accidents, sickness and death, invalidity and old age, and unemployment, see Frankel, Lee K., and Dawson, Miles M.: *Workingmen's Insurance in Europe*. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1910.

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in all cases that "industry rather than the individual workman or employer should bear the inevitable hazards of production."

SUMMARY

The main facts regarding physical safety in industry in Springfield as revealed by inspections made by the survey of all but one of the factories employing 100 or more persons, of several of the smaller factories, of the two largest laundries, all of the larger and a few of the smaller mercantile establishments; from an extended examination of the laws and official reports; and from interviews with a large number of workers in their homes, may be briefly restated, as follows:

No establishment visited showed marked disregard for the safety and physical welfare of its workers. Some showed unusual care. Nevertheless because of situations difficult to handle, such as old buildings erected before the development of modern factory construction, in certain other Springfield work places large numbers of employees were subjected to well recognized industrial hazards.

Between 1909 and 1913, 36 Springfield individuals were killed by some kind of industrial accident, the largest numbers being among railway employees, mine workers, electrical workers, and men engaged in the building trades. Since the recording of causes of deaths was very faulty, and for other reasons, the real total is probably even greater. Thirty-six persons killed in industry, however, show a serious situation—one demanding immediate attention.

As to non-fatal accidents, the available data again are very incomplete. Nevertheless 35 such accidents were reported for the single year 1913. These, particularly with the six fatal accidents of that year, are sufficient to show a need for vigorous work in accident prevention.

According to the Illinois Employers' Liability Commission, about one-half of the accidents occurring annually in industry are due to dangerous conditions which may be removed or to carelessness on the part of workmen which educational work regarding industrial hazards may greatly reduce. Up to the time of the survey, however, no energetic accident prevention

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campaign had ever been carried on in Springfield either by employers' associations, labor organizations, civic bodies, the public officials, or the great majority of employers, although such campaigns have yielded excellent results elsewhere.

An important requisite for carrying on campaigns of this kind is a knowledge of the facts of work accidents: how many, where and why accidents happen, how they may be avoided. These data are not now available. The provisions of the statutes requiring the reporting of work accidents are confused and in some cases overlap, since in some cases similar establishments must report to entirely different authorities, because state officials do not compile the facts for the same periods, and because the data are not classified by industries or kinds of work.

Again, protective legislation going into considerable detail, applying to accident prevention in mines, on steam railroads, to building and construction work, and to factories, mercantile establishments, mills, and workshops, is found on the Illinois statute books. The work of the mine inspectors and railway safety inspectors, however, is not well organized, and is not carefully checked up and reported on from time to time—no reports at all being issued to show the efficiency of the work of the mining inspectors. At the time of the survey the last published report of the chief factory inspector was two years old. It showed but one inspection to enforce the bridge and building construction safety law in Springfield in the two years ending June, 1912, and no inspections to enforce the act applying to factories, mercantile establishments, mills, and workshops. Unpublished records, however, for the year ending May, 1914, indicated much greater activity.

Again, Illinois for several years has had an occupational disease law. It is based upon studies made by the Illinois Occupational Disease Commission. Causes of occupational diseases enumerated by the commission are: vitiation of air with irritating or poisonous dusts and fumes; direct contact of workers with irritating and poisonous substances; extremes of heat and cold; extremes of dryness and humidity; defects in lighting; abnormal atmospheric pressure; jarring, shaking, and deafening noise; and overstrain, fatigue, hurtful postures, and overexercise of

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parts of the body. A number of these conditions were found by the survey in greater or less degree in Springfield. In some cases they seemed inherent in industrial processes, and in so far as that was true their bad effects could only be minimized. In others they were clearly removable. Shortcomings in lighting, in the provision of exhausts on emery wheels, and in provision of seats for employes while at work, especially women, were particularly noted. The law as to seats is vague and does not include all occupations. More definite legal provisions are needed regarding the provision of seats.

On the other hand, it does not seem wise to try to cover by specific regulations all the varying and multitudinous conditions presenting health hazards, which do not admit of clear-cut classifications. Instead, we recommend several measures affecting all of these questions: first, that the numerous independent bodies dealing with labor conditions be consolidated into a single Department of Labor and Mining, with bureaus in charge of special work. These should include a bureau of inspection responsible for railroad, factory, and other inspection service, except mining; of mining; of research and labor statistics; a bureau of workmen's compensation; and other bureaus to be recommended in later parts of this report.* Second, as a part of this reorganization plan, it should be provided that the reporting of work accidents should be centered in one authority, a bureau of the board, which would make careful compilations, study the information, and then give wide publicity to methods of averting workshop dangers. And third, the plan of reorganization should provide for the establishment of a board or Industrial Commission in the new labor department, whose duty will be to confer with employers and employes in making special rules to fit each case which appears dangerous or hazardous to life, health, and safety. Wisconsin has found this a satisfactory procedure, and New York and Pennsylvania have also adopted it.†

* See pp. 144-147 for a fuller statement of the scope, organization, and functions of the proposed state Department of Labor and Mining.

† Similar industrial commission plans uniting in one authority the administration of workmen's compensation, factory inspection, and other labor laws, were adopted in 1915 in Colorado, Indiana, Montana, and Nevada.

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Some efforts to eliminate possible sources of the start and spread of fires and to provide adequate fire-fighting facilities were observed in many Springfield factories, but this could not be said of all. In a number of establishments provision for adequate egress had not been sufficiently looked after.

In this particular, government regulation is again faulty and inadequate. Two statutes govern the matter. One provides for fire-escapes of a type to be determined by the local government, but in Springfield the type had not been determined. Enforcement is left to the sheriff and grand jury, neither of whom inspects factories. The second statute stipulates that "sufficient and reasonable means of escape" must be provided, but this generalized requirement allows too much room for disagreement over interpretation to permit very effective enforcement. A Springfield ordinance enacted many years ago also deals with fire protection but because of changes in the official machinery provided for carrying out the provisions, and for other reasons, the ordinance has not been effective.

But even if the laws fully accomplished their purposes, they are still insufficient in that they do not include all the provisions that may be reasonably expected—among these being provisions for removing conditions which cause fires and help their spread, and provisions for fire-fighting facilities. Some of the more important legal requirements suggested for enactment are detailed on page 30. The New York law, though falling short of much that may be desired, is used as a basis for the more important of these suggested provisions.

Illinois, like many other states, has enacted a law within the last few years to compensate workmen injured while at work. This law marked a distinct step forward, for it eliminated the "assumption of risk," "fellow servant," and "contributory negligence" defenses against the recovery of damages by injured workmen. But it has three great weaknesses which must be eliminated before the injured workman will get just treatment. First, it is optional with employers, and many, especially in the most hazardous industries, have elected to be exempt; second, injuries resulting from occupational disease are not covered; and third, even where operative, the law as administered

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does not in all cases eliminate the drain of lawyers' fees. Not until these weaknesses have been remedied will Illinois have a law which establishes the basic compensation principle that industry should bear the losses from the inevitable hazards which it has introduced. A new law, or amendment to the present law, much more firmly establishing the basic principle of compensation should be secured; and the administration of the act should be made a function of the Industrial Commission of the reorganized labor department.

Safety while at work should not be wholly dependent upon legislation. The employer, since he has a special responsibility, should see that dangerous conditions are eliminated as soon as recognized. The workers individually should feel the importance of using as much care as possible, and their co-operation through their unions should be expected. The public should assist through educational methods and campaigns for safety and industrial sanitation.

Work conditions affecting health were found in many instances in Springfield to constitute real dangers. Some of the conditions can be changed by the measures already urged; and some of the resulting damages to the workers may be taken care of by a broad interpretation of the compensation laws. There will still remain a large amount of sickness however, due to work conditions, which will fall as a disproportionately heavy burden on the worker and his family. The loss should at least be shared by the industry and the public, one method being found through state health insurance. We therefore recommended as a first step that the legislature appoint a commission to study thoroughly the problem of such insurance and to report as soon as practicable.

III

CHILD LABOR

As already seen, safe and sanitary work conditions are of sufficient community concern to make them the subject of legal enactment. Similarly the public through legal regulation in most states has recognized its responsibility in preventing child labor.

From conditions found in Springfield, however, it would appear that neither the child labor law of Illinois nor its enforcement is satisfactory. There are opportunities for fraud and evasion in the provisions governing the issuance of certificates to permit children under sixteen years of age to go to work, while violation of the provisions limiting the hours of work of children under sixteen seems to be the rule rather than the exception.*

THE ILLINOIS CHILD LABOR LAW

The present child labor law of Illinois has been on the statute books for over 12 years without alteration. When enacted it was considered a piece of advanced legislation, and even today ranks among the best laws in the different states. There are, however, certain weaknesses which need correction. The main features of the law may be divided into two groups—those applying to children under fourteen years of age, and those applying to children under sixteen—and summarized as follows:

Children under fourteen years of age may not work:

(a) in any theater, concert hall, or place of amusement where intoxicating liquors are sold, in any mercantile institution, store, office, hotel, laundry, manufacturing establishment, bowling alley, passenger or freight elevator, factory, or work shop, or as a messenger or driver therefor;

* In examining into child labor conditions in Springfield two methods were pursued. First, a study was made of the issuance of working certificates in the office of the superintendent of schools. Second, to discover the character of law enforcement, children who had secured working certificates were visited in their homes and followed up in their work places to discover whether in their employment the provisions of the child labor law were being obeyed.

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- (b) for wages when the public schools are in session;
- (c) before 7 a. m. or after 6 p. m., or for more than eight hours a day.

Children under sixteen years of age may not work:

- (a) in any of the above named places or occupations without first obtaining an age and school certificate;
- (b) in any of the above named places or occupations before 7 a. m. or after 7 p. m., or for more than eight hours a day;
- (c) in operating dangerous machinery, or as a pin boy in a bowling alley, or in preparing any composition in which dangerous acids or materials are used, or in operating an elevator, or in manufacturing goods for immoral purposes, or in any theater, concert hall, or place of amusement where intoxicating liquors are sold, or if a female, in any task which compels the worker to remain standing constantly.

AGE AND SCHOOL CERTIFICATES

Age and school certificates must be secured by children under sixteen years of age before they may go to work. For public school children these are issued by the superintendent of schools or someone appointed by him. For parochial school children they are issued by the heads of such schools. The conditions under which they may be issued are clearly set forth in the law:

Proof of Age: To get a certificate a child must first prove himself (or herself) to have passed the fourteenth birthday. This may be done by any of the following kinds of evidence:

- (a) record of the last school census;
- (b) certificate of birth or baptism;
- (c) register of birth;
- (d) affidavit of parent or guardian taken before the juvenile or county court;
- (e) age according to school record.

Educational Requirements: The child must also present a school certificate signed by the parent, teacher, and principal which states that he or she can read and write legibly simple sentences.

Certificates for Illiterates: A child even though illiterate may secure a certificate by presenting evidence of attendance at an evening school.

These provisions for obtaining work certificates constitute the greatest weakness of the Illinois child labor law and are much in need of amendment. It is easily possible that under them by a little sharp practice a child may prove himself fourteen years of

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age, though that may not be the fact. The proverbial statement still holds true that a chain is as strong or as weak as its weakest link. So this proof of age provision is as weak as the least adequate of the proofs which may be offered and must be accepted for the issuance of certificates.

Of the five kinds of proof enumerated three are open to easy evasion. In the case of the first, the record of the last school census, for example, a father desiring to put his daughter to work can give a false figure to the school census enumerator in order to prove the child fourteen years of age. The census figures so obtained become evidence of age which cannot be questioned. Since this form of proof has not been accepted recently in Springfield, its results cannot be scrutinized. Experience elsewhere, however, has shown that this provision affords a possible loophole for evasion of the law.

Second, if a parent goes before the juvenile court and makes affidavit that his child is fourteen years old his oath becomes proof of age; yet experience has shown that parents who wish to put their children to work before they are fourteen years of age are often not unwilling to swear falsely. Investigation a few years ago in a Pennsylvania town, where parents' affidavits were accepted as proof of age, revealed the fact that 11.5 per cent of the children between ten and fourteen years of age were at work on false affidavits alleging them to be fourteen years of age or over.*

Third, there is easy opportunity for evasion in the last requirement—that age according to the school record must be accepted. One hundred and thirty-five of the 138 children (almost 100 per cent) granted age and school certificates in Springfield in the year ending April 30, 1914, presented this kind of proof of age. In following up 55 children in connection with a study of law enforcement as related to certain other provisions, we accidentally discovered one instance of a certificate improperly issued under this provision. Just before applying for his certificate a boy who had been attending a public school changed to a parochial school and gave a date of birth showing him to be fourteen years of age.

* See leaflet issued by National Child Labor Committee, New York City, for full statement of conditions found in this Pennsylvania investigation.

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This age record, under the law became proof of age for the issuance of his working certificate and was accepted as such. It showed the date of birth as June 29, 1899. In the church record, made at the time of birth, the date was entered as June 29, 1901. The boy thus at most was twelve years old instead of fourteen when the certificate permitting him to go to work was obtained. The experience of other states would lead one to expect that this boy was not an isolated case, but one among many.

Evasions such as this, due to lax provisions of the law, not only result in children under the age of fourteen going to work—a thing which the state has decided to be against public policy—but they encourage children at an impressionable age to look upon the law as a thing a clever person can evade with impunity. New York state in the requirements of the law covering the issuance of working certificates has proven the practicability of requiring real age evidence and rejecting the inadequate proofs now accepted in Illinois. It is recommended that the Illinois statute be amended by removing its weak links (in its alternate provisions for proof of age) and substituting the provisions of the New York law.*

In the amount of schooling required for the issuance of certificates the Illinois statute is also inadequate. The only requisite is that a child be able to read and write legibly simple sentences. The sentences do not even have to be in English. No test of his knowledge of arithmetic is required. Examination of the grades attained by Springfield children granted certificates in the year ending April 30, 1914, shows that of 131 children whose educational standing was given, only 26 had finished grammar school,

* In the amendment to the New York child labor law passed in April, 1916, to go into effect February 1, 1917 (State of New York Assembly Bill No. 1653), one of the following documents must be submitted as proof of age when securing an employment certificate:

- (a) *Birth certificate; passport or baptism certificate.*
- (b) *Other documentary evidence.* This can be accepted only when documents enumerated in (a) are lacking, and must consist of such evidence as will be approved by the commissioner of health or the issuing officer of the board of health. A record of such evidence must be kept in full.
- (c) *Physicians' certificates.* In cities of the first class, certificates are accepted, based on separate physical examinations by two physicians (and a third, if the first two disagree), and on evidence furnished by parents or guardian. Application must be filed sixty days before examination.

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while 64 had not completed the sixth grade. Twenty-eight children were in the fifth grade when they received certificates, 10 in the fourth, while one had just completed the third grade. It is not only short-sighted but thoroughly deplorable for the state to be willing to allow its future citizens to cut short their education with the ability to read and write legibly simple sentences, and thus be sponsor, as it were, for their too early entry into gainful pursuits. To cite the state of New York again, no child may legally go to work there who has not completed the sixth school grade.

Finally, there are no requirements in the law as to the child's physical condition before his working certificate is issued. An anemic or tubercular boy may require fresh air and sunlight, but that fact is no bar to his getting a certificate to work in a Springfield factory, or for that matter in a Chicago sweat-shop. A girl may be sickly and undersized, but that will not prevent her from getting a certificate which will permit her to stand behind a counter from morning till night. That some safeguards should be set up in this regard is not a theoretical matter, for by the New York law already referred to, physical fitness must be determined through thorough examination by a medical officer of the health department in every case before an employment certificate is issued. The officer issuing the certificate must also sign a statement that the child has reached the normal development for his or her age, and is in sound health and physically able to do the work expected to be done. Nor does physical care end there, for children employed in factories may be examined at any time by the medical officer of the labor department and if found defective their certificates may be cancelled. Illinois should at least require the first safeguard—proof of physical fitness for work—before granting an age and school certificate.

LAW ENFORCEMENT

So much for the provisions of the law. Its enforcement, aside from the work certificate provisions, is under the control of the State Factory Inspection Department. The results of our investigations indicated a very unsatisfactory situation with regard to enforcement at the time of the survey. Since the time limit

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within which the field work of the survey had to be done did not permit visits to all stores, factories and other places in the city subject to the child labor law; and as we were without authority to require proof of age from employers, it was determined to test the efficiency of law enforcement by interviewing in their homes and elsewhere as many as possible of the children between fourteen and sixteen years of age who had been granted working certificates in the past year. In the time available 55 children selected at random were so followed up. These children, it will be remembered, may not legally work over eight hours a day or before 7 a. m. or after 7 p. m., or in any of an enumerated group of prohibited employments. Our endeavor was to determine how far these conditions were being observed. In addition, information was also secured from stores and factories and from home visits made for other purposes.

The results of these inquiries indicated that enforcement of the child labor law, especially those sections restricting hours of work, was decidedly lax. Among the 55 children concerned, it was found that 40, or over 70 per cent, had been illegally employed; and that there were only 15 of the number that had not worked illegal hours. Moreover, the majority of the 15 not working illegal hours were employed in union shops where the eight-hour day prevailed for all workers.

These violations of the hour law were not merely technical. Four of the children began work before 7 o'clock in the morning, while 21 worked in the evenings after 7 o'clock. Thirty-four worked more than eight hours a day, while 30 exceeded the weekly limit of forty-eight hours. In the employment of these 40 children *there was a total of 89 separate violations of different sections of the law on hours of work.*

These violations were not restricted to any one industry or occupation. A boy of fourteen employed as errand boy for a cleaning establishment, although he had no age and school certificate, worked nominally from 8 a. m. to 6 p. m., or nine hours a day; but his hour of leaving was so irregular that he had to give up an evening course in a business school. A girl of fourteen, also without a certificate, said she was sixteen when she applied for work in a glove factory and worked there from 7

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a. m. to 5 p. m., or nine hours a day and fifty-four hours a week. A delivery boy for a grocery went to work at 6 o'clock in the morning, though only fifteen years of age. A number of children employed in mercantile stores were, like other employes, required to work till 9 p. m. on Saturdays, although such employment was obviously illegal.

Drug stores were among the worst offenders. One boy fourteen years old had to be at work at 6 a. m. and stayed till 6 p. m., except on two days each week when he worked until 11 p. m. He also had to work alternating Sundays so that *every other week he worked eighty-five hours*. In another drug store, a young learner fifteen years old worked from 7 or 8 in the morning until 9 or 10 at night, with an hour off for each noon and supper. (On days when he went to work at 7 he was off at 9.) Thus he worked twelve hours a day for six days a week, besides half a day on Sundays. His weekly hours usually exceeded seventy,—in contrast to the forty-eight allowed by law. Another boy, fourteen years old, washed bottles, ran errands, and did other odd jobs in a drug store, from 7 a. m. to 6 p. m. except for an hour at noon. Besides these ten hours a day for seven days a week, he also had to work two, sometimes four, nights a week until 10.30 or 11 p. m. The hours were so long, and he was so tired, his mother stated, that he used to cry after he came home at the end of his day of fourteen hours of work. His mother finally made him quit this job.*

In one hotel, a boy of fifteen was found employed as bell boy from 11 at night till 7 the next morning, for seven nights a week, although the law explicitly forbids all night work for children under sixteen. Several messenger boys of fourteen and fifteen years also worked late hours at night—one until 2 a. m., another until midnight after a day's work that had begun at 7 in the morning. A young waitress of fifteen, still wearing ribbons on her hair, worked till 10 p. m. one night a week in a confectionery

* A law passed in 1911 in New York restricts the hours of work for clerks in pharmacies and drug stores to seventy per week, and provides for one day off from work in every two weeks. An amendment to the law was enacted in 1914 which provides that such workers shall have one afternoon and one evening off each week. U. S. Bureau of Labor Statistics, Bulletin 166, pp. 186-187; and Bulletin 148, Pt. II, p. 1553.

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store. Each night that she worked late some member of her family had to call for her, as they felt it unsafe for her to come home alone at that hour. These are a few illustrative cases among the many violations of the provisions of the law regarding hours, which were discovered in the survey and which tended to show that this part of the child labor law at least was almost a dead letter.

Hour violations, however, were not the only violations discovered. Thirteen cases of children under sixteen years of age employed without age and school certificates were also found. According to testimony of a few children their employers never asked their age. One girl had never heard that a certificate was necessary. In other cases children had not told the truth, knowing that they would not have been hired if under sixteen. One case came to our attention in which a girl alleged to be only thirteen had gained employment in a laundry by passing herself off as sixteen. Employers in such cases are liable for violation of the law and obviously should require all children not clearly over sixteen to present definite proof of their age. In two cases children less than fourteen years of age were found in violation of the law working as errand or delivery boys before and after school.

In the group of 55 children there were three boys who were engaged in occupations absolutely prohibited to children under sixteen years of age. Two lads of fifteen were found who had worked as trapper boys until the mines had shut down. One expressed a desire to return to the work but said his father had forbidden it because "so many trapper boys get consumption." A third boy of fifteen worked in a bowling alley where flagrant violations of the child labor law existed. Several nights in succession the writer found *half a dozen boys not over twelve years of age, one or two much younger, setting up pins till 10.30 and 11 p. m.*, though under the law no one under sixteen might be so employed.

Reasons for this lack of enforcement of the law obviously could not be discovered without a thorough investigation of the State Factory Inspection Department, which was outside the scope of this investigation. However, the recent report of the Illinois Efficiency and Economy Commission on the administra-

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tion of labor and mining legislation in Illinois, throws some light upon the question. Following are excerpts from its report:

"With the present force of inspectors (in the factory inspection department) it is out of the question to inspect frequently all establishments of the State, and many are probably not inspected at all. Inspections are more or less casual, except as respects the more dangerous machinery and the more dangerous processes."

"Perhaps it may be worth while here to call attention to the fact that legislation since 1907 has at least trebled the work placed upon the department of factory inspection, while during the same period the number of deputy inspectors has been increased from 25 to 30. It has been impossible to enforce effectively all labor legislation for the whole state, and the tendency to some extent at least has been to devote attention primarily to Chicago."

To follow the situation for the several recent years, in the twelve months ending December 15, 1910, the factory inspection department made 1,372 child labor inspections in Springfield and brought 15 successful prosecutions. In 1911 the fiscal year was changed, and from December 16, 1910, to June 30, 1911—a period of six and a half months—no inspections were made in Springfield. Three prosecutions, probably resulting from inspections of the previous year, were successfully brought in that period, however. In the year ending June 30, 1912, only 17 inspections were made in the city. There were no prosecutions. Thus in the year and a half ending June 30, 1912, only 17 child labor inspections were made in Springfield. This lapse in inspectional work undoubtedly led to lapses in the efforts of employers to observe the law and may be partially responsible for present conditions.

In 1913 the Springfield activities of the inspectional department appear to have been increased, and in the year ending May 31, 1914, the year ending at the time of the survey, according to figures supplied by the chief inspector, 1,036 original and 55 reinspections to enforce this and other labor laws were made in Springfield. Seven children under fourteen years of age were found working; 21 children between fourteen and sixteen were found at work without certificates; 32 children under sixteen years of age were found working over eight hours a day; three

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were found at work before 7 a. m.; and 28 after 6 p. m. Two children under sixteen were reported engaged in prohibited employments. Fourteen successful prosecutions resulted in fines and costs amounting to \$127.40. These facts indicate much more vigorous inspectional work than had been carried on for some time previously. *Yet it was at the end of this same active year and in the month or two following that the survey investigations were made and the large number of violations of the child labor law were found.* Apparently more effective work is needed to bring about even reasonably good observance of the law. The cases which came to our attention of children younger than sixteen passing off as that age suggest, moreover, that inspectors should challenge the ages of all children not clearly over sixteen.

Except during the holiday rush season, the working hours of inspectors, according to the first deputy factory inspector, are from 9 a. m. to 5 p. m. By questioning employers and workers in these hours they are able to discover cases where the law limiting hours is being violated unconsciously through ignorance of its provisions. But violations deliberately and knowingly committed are almost impossible to discover unless inspectors are on duty after 7 p. m., the hour beyond which children under sixteen are not allowed to labor. Springfield conditions clearly suggest the need for better adaptation of the hours of inspectors to the demands of their work. Moreover, in the enforcement of the child labor law—particularly the provisions limiting hours—better results could be obtained by varying the method of visiting establishments, and occasionally substituting special investigations to find the places where and the hours for which children with age and school certificates are being employed. Experimentation along this line by the Factory Inspection Department would seem to be very worth while.

Another probable reason for the frequent violations of the law is the neglect of the Factory Inspection Department to make public itself the names of firms prosecuted, and its refusal to give them out to be used for publicity purposes by anyone else. This policy, adopted within the year, is part of a commendable effort to co-operate with employers in securing enforcement of

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the law. In this instance, however, we believe the policy has been carried too far—so far as to guard from publicity employers who have shown that they do not deserve such protection.

For a number of years it has been the policy of the inspection department not to bring prosecutions when violations of the law have seemed unintentional. In such cases employers have been allowed to sign cards admitting their offenses and agreeing not to break the law in the future. If, however, later violations were discovered, legal action was to be taken. Thus the department ordinarily brings prosecutions only after one violation has been detected and passed unprosecuted. Under these conditions concealment of the names of firms prosecuted appears thoroughly questionable; for it thus protects from the odium attached to conviction of law breaking those who have forfeited a right to such protection. Indeed, in the cases of two large Springfield mercantile establishments whose owners were convicted in the early part of 1914 for violating the child labor law, a policy which permitted the matter to be "hushed up" was entirely inexcusable, since both of the firms had been previously convicted and fined for a similar offense.

There is, however, a more important reason why this policy on the part of the Factory Inspection Department is unwise. It is in effect the relinquishment of one very useful means for securing compliance with the labor law, the enforcement of which is the department's special duty. The average employer does not greatly worry over paying a fine of \$5.00 and costs. It is a mere trifle soon forgotten. Indeed it may easily happen that by employing a child at \$3.00 to do work which otherwise would have to be done by a woman at \$5.00, a storekeeper may through the violation of the law save himself much more than the amount of his fine. But if the news appears in the papers which all his neighbors read, that Mr. John Doe, prominent merchant, was fined for violating the child labor law, that is quite different a matter. Experience has shown that he will think twice before he breaks the law again. Not only that, but such publicity will serve forcefully to remind other storekeepers of a labor law which is being enforced, and in some cases where needed, will lead to putting their businesses in order.

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If all establishments coming under the Factory Inspection Department's supervision could be inspected every six months, the need for the use of this power of publicity would be less. But such is not the case. The department had only 30 inspectors, and if experience of the few years prior to the survey may be taken as a criterion, even semi-annual inspection of the majority of Springfield's establishments is not to be looked for. Under these circumstances the reasonable use of publicity in securing compliance with the law should be expected as a part of the program of the inspection department.*

In addition to the case of children employed illegally a number of children under sixteen were found by the survey not attending school and also not employed. Some of them had secured work certificates and some had not. Apparently it was not difficult for a child to drop out of either the private or public schools of Springfield without attracting attention. As shown in the school section of the survey, approximately 600 children were leaving the public and private schools each year between the ages of fourteen and sixteen while only a third or less obtain certificates†—a necessary requirement for those dropping out under sixteen, since a child under that age is not expected to leave school except under the necessity of working. Under a well-developed plan for enforcing the compulsory education law such conditions could not exist; for after a child was once registered upon the school

* During the period since this section was first drafted, early in 1915, after full discussion of this policy between a survey representative and the Factory Inspection Department, a number of prosecutions were brought and given wide publicity. The chief inspector personally took charge of the prosecutions and did all in his power to bring them to a successful conclusion. His efforts were defeated, however, by the state's attorney's office, which, though sworn to uphold the laws of the state, was very active in attempting to prevent successful prosecution of the violators.

The women voters of the city, who are especially interested in child labor legislation, and who must particularly appreciate the evils of child labor, and the labor unionists, who were primarily instrumental in placing this law upon the statute books, should feel a special responsibility in bringing home to the state's attorney's office the significance of its attitude toward these cases of child labor law violations.

Later in 1915 the chief factory inspector had other inspections made in and around Springfield, and succeeded in prosecuting violations to the extent of \$117 in fines and costs.

† Ayres, Leonard P., Ph. D.: *The Public Schools of Springfield, Illinois*, pp. 19-20. (*The Springfield Survey*.)

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records it would be impossible for him or her to drop out for any but legal cause without being promptly followed up and returned to school by the truant officer. Both public and private schools should co-operate to this end, for habits of loafing (and these must be inferred from the fact that so many children drop out of school who do not get certificates to go to work) acquired at the critical ages of fourteen and fifteen years are likely to have a serious effect upon the child's industrial future. Obtaining a work certificate, moreover, does not entitle a child to stay out of school unless he finds employment. The truant officer should, a month or six weeks after each certificate is issued, follow the child up to find out whether he has employment, and under what conditions. In this way much illegal employment would be discovered and reported to the factory inspector, and the children who used their certificates as licenses to loaf would be returned to school.*

SUMMARY

It appears, therefore, that neither the Illinois child labor law nor its enforcement is satisfactory. In many cases the enforcement was decidedly lax. Drug stores were among the worst offenders. The provisions of the law in regard to working certificates are seriously defective and need amendments to accomplish the following ends:

1. The elimination of those sections of the law relating to proof of age that are susceptible of relatively easy evasion.
2. The requirement of at least a sixth-grade education or its equivalent before a child under sixteen years of age may leave school to go to work.
3. The requirement that evidence of normal development and sound physical condition be produced before a work certificate can be secured.

Before more efficient enforcement of the law can be secured it will probably be necessary to give the Factory Inspection Department a larger corps of inspectors. In the meantime, how-

* For further discussion of the enforcement of compulsory school attendance see McLean, Francis H.: *The Charities of Springfield, Illinois*, pp. 146-151; and Ayres, Leonard P.: *The Public Schools of Springfield, Illinois*, pp. 18-20. (*The Springfield Survey*.)

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ever, we believe it possible to increase the efficiency of the present force through a number of measures, as follows:

1. Better adjustment of the hours of inspectors' work to the character of their duties—especially with a view to their being on duty after 7 p. m., the hour beyond which children under sixteen are not allowed to work.

2. Revision of other methods for discovering violations of the hours of labor law for children.

3. Adoption of a regular policy of giving full publicity to successful prosecutions.

Finally it would promote better child labor law enforcement and prevent children's using age and school certificates as licenses to loaf if the truant officer would follow up children granted certificates to find out where and under what conditions they secure employment.

IV

WAGES AND REGULARITY OF EMPLOYMENT

The incomes of work people are a matter of community concern because they fix to a very great extent the standard of living of workers' families. Within certain limits they determine the kinds of houses these families live in, the quality of the food they eat, the kinds of clothes they wear, the amounts they are able to put by for a rainy day, and they have a clear bearing upon the family's present and future problems of self-support and economic independence. They also set limits to the educational advantages which many workmen's children may enjoy. The incomes of wage-earners, therefore, particularly among the lower paid working people, are closely related to the community problems of housing, public health, compulsory education, child labor, and even charitable assistance.

Workmen's earnings, however, must be measured with two things in mind: not alone wage rates, but also the regularity of employment—not to mention a third consideration, the cost of living. The family of a man who earns a high hourly rate, for example, but whose work is irregular, may not be as well off as that of a man whose wage rate is lower but who has steady employment the year round. Our data, therefore, regarding wage rates and regularity of employment—the two factors which fix the amount of income—are presented together.

The sources from which this information is drawn are: first, data gathered from employers when inspections of factories, stores, and laundries were made by the survey investigators; second, data secured from trade unions; and third, data obtained in visits to the homes of 100 Springfield workmen whose families contained a total of 272 wage-earners—these 100 families having been chosen with a view to securing representative workers.*

* For the method by which these families were chosen see first paragraphs of Chap. VI, page 118, where conditions found in the families are discussed more fully.

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Facts collected from 82 manufacturing establishments by the Springfield Commercial Association early in 1914 also supplied some information regarding wage rates.

The importance of irregularity of employment as an industrial problem, while receiving attention from time to time, is, nevertheless, we believe, not generally appreciated. In fact, it is only when one begins to investigate irregular employment that it looms up in its real proportions, and one sees what a factor it is in determining the yearly income of wage-earners. A telling illustration of this fact is that out of the 272 wage-earners in the families of the 100 Springfield workmen already referred to, one-fifth had not earned a cent the week previous to the date on which our information was gathered, while over a third had had irregular work during the whole of the preceding year.

INCOME OF COAL MINERS

Irregularity of employment is greater among coal miners in Springfield than in any other important occupation group. During the fall and winter months over 3,500 of these workers, more than half of them Springfield residents, may be found at work in mines located in or near the city. For eight months of the year, from September through April, these men may be seen daily on their way in the mornings to the various tipples which mark the entrances of the mines, and returning home in the late afternoons with blackened faces and grimy clothes that suggest something of the dingy realities of this underground occupation. Some of them have been digging and loading coal; others have been laying tracks, timbering passages, driving mule-drawn cars, or "trapping" (tending passage entries). The shot firers begin their work at night when the others leave off; theirs is the dangerous task of handling explosives and blasting out walls of coal for the next day's work.

The wage rates of tonnage men—miners and loaders, but not those paid by the day—sound rather liberal; they are determined by biennial agreements between the operators and the mine workers' union. Table 2 shows the 1913 wage rates by occupations for the 17 mines located in or near the city—the latest statement of rates available when this report was prepared.

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TABLE 2.—RATES OF PAY AND NUMBER OF WORKERS BY OCCUPATION IN THE 17 COAL MINES LOCATED IN OR NEAR SPRINGFIELD. 1913^a

Occupation	Workers	Rate of pay
Miners and loaders	2,638	57 cents to \$1.27 per ton
Drivers •	243	\$2.84 per day
Trackmen	67	\$2.84 per day for layers
		\$2.62 per day for helpers
Timbermen	70	\$2.84 per day
Shot firers	51	58.9 cents per hour
Laborers	91	\$2.62 per day
Cagers	45	\$2.84 per day
Trappers	35	\$1.50 per day
Not classified	370	....
Total	3,610	

^a Annual Coal Report, Illinois State Mining Board, 1913, p. 58.

The miners and loaders, it will be noted, who make up the great majority of mine workers, are paid from 57 cents to \$1.27 per ton for the coal they mine. The rates vary according to the difficulties of mining. At these rates many workers are able to make as much as \$5.00 a day, when there is plenty of work; a large proportion also fall below that amount. Some of the miners interviewed even reported daily earnings of \$7.00 and \$8.00.* If these earnings were continuous throughout the year the miners would earn good incomes; but unfortunately such is not the case. Out of more than 300 possible working days in the year ending June 30, 1913, the mines in Sangamon County operated an average of only 181 days.

Of the 17 mines located in or near Springfield one was closed during the entire month of July, two were closed during both July and August, and one was closed during August and September. Table 3 gives by months the average number of days for which the mines of Sangamon County were in operation.

To the miner and his family the very irregular work indicated

* As this report goes to press the newspapers announce the result of a referendum vote of the Illinois miners on the 1916 scale tentatively agreed to by the committee of operators and miners. The new rates, which are an increase of three cents per ton over the 1914 rates for tonnage men, and a five per cent increase in the wages of day laborers, are approved.

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by this table is a serious matter. It means the loss of more than a third of the breadwinner's working time. Thus the driver, timberman, cager, or track layer, paid at the rate of \$2.84 per day, is able to earn very little over \$500 a year, even if he loses no time on account of illness or accident and has full-time work every day the mine is in operation. As a matter of fact, however, on many days when mines operate they run at less than capacity and do not give employment for eight hours to their full quota of men. This is shown by the difference in output of Sangamon County coal mines during August, 1912, and February, 1913, during both of which months the mines were in operation an average of fifteen days. In August, 397,513 tons of coal were mined, as against 491,866 tons mined in the same number of days in February.*

TABLE 3.—AVERAGE NUMBER OF DAYS PER MONTH ON WHICH SANGAMON COUNTY COAL MINES WERE IN OPERATION, IN YEAR ENDING JUNE 30, 1913^a

Year and month	Average days of operation
1912	
July	11
August	15
September	15
October	20
November	19
December	19
1913	
January	18
February	15
March	15
April	14
May	10
June	10
Total	181

* Annual Coal Report, Illinois State Mining Board, 1913, p. 40.

Some of the miners during the slack periods try to fill in their time with other work, but there are difficulties in the way of this

* Annual Coal Report, Illinois State Mining Board, 1913, pp. 30 and 40.

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solution of their problem. In the first place, as is seen by the last table, the days of slack work are to a considerable extent scattered throughout the year. In the second place, few men possess skill for other trades, and in cases where they do possess it, they are often required to pay initiation fees and dues to other labor unions, while keeping up their membership in the United Mine Workers of America. Thus one man in 1913 joined the bricklayers' union and secured employment for the summer. Another, to get work at \$2.00 a day in a blacksmith shop, joined the blacksmiths' union. The union dues of the latter, in the two separate organizations, amounted to \$3.65 a month.

Some men find occasional jobs at driving, hod carrying, "digging in the streets," or as farm hands. Many Italian miners find work at \$1.75 a day as trackmen with the street railway company which takes on about 300 extra men in the summer. A large proportion of the miners, however, are either unable to find any work at all, or to find work that they can do, and are, therefore, idle while rent and insurance bills pile up and groceries and meat are secured on credit. The effect, incidentally, of these frequent periods of idleness on the order and security of family life and on any hopeful plan for the future must necessarily be detrimental.

Miner after miner told the same story of idle days and uncertain work. A few instances will illustrate. An "entry" man who could make \$15 to \$20 a week counted on work only half the time. A German miner who could make up to \$8.00 a day usually received only \$24 to \$30 for two weeks' work. The wife of a Lithuanian complained that her husband's work was always irregular—only one or two days of work a week. If he could have only three full days of work at \$5.00 a day regularly, she would be perfectly content. An experienced miner forty-four years of age could make \$7.00 a day. Even with three days of work a week his wife declared she could save. She was seen on May 29, and he had had no work since April 1 and there was no prospect of any until September. This woman said she could not understand how families could get along in slack times when they didn't own their homes as she did. A young man from Kentucky was trying to make a living for himself and his family; but from April 1 to June 1, 1914, during the suspension pending the signing

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of a new wage agreement, he had worked but two days, for which he had received \$16.53. "If he had only three days' work a week," said his wife, "we could live just fine. But he doesn't get even that. If I didn't own this house, I don't know how we'd manage. I can't save a cent." A shot firer earning \$4.00 a day was idle half the time. Even with the earnings of two daughters in the shoe factory, and contributions from a son not at home, the family of 12 had had to seek relief from the Associated Charities. The cause of their need was described by the relief agent as "sickness and insufficient wages."

The net result of these conditions is that miners' incomes, which when judged by wage rates appear to be liberal, are reduced until it is impossible in the case of many of the men to supply an average family of five or six persons with the reasonable necessities of life.

In the report of the State Mining Board of 1913 a computation of the wages paid 4,935 miners in the sixth district (in which Springfield is located) showed that the average earnings per man per year were \$666.* This is a very rough estimate, and the method used in obtaining it is open to criticism; two other estimates give lower figures. The secretary of the Illinois Mine Workers' Union stated at a hearing before the Federal Industrial Relations Commission in Chicago that as a result of unemployment miners' earnings in Illinois averaged less than \$600 a year.† From the Mine Rescue Station Commission it was learned that the actual earnings of miners in recent years have usually averaged between \$500 and \$600 per year, but that in 1913 the amount fell under \$500. When it is remembered that this figure is several hundred dollars below the minimum requirements set in a number of family budget studies made a few years ago for families of two adults and from two to four children,‡ and that the cost of living has increased rapidly since these studies were made, one begins to realize the hardships endured by workers' families through the cycles of unemployment that have almost become chronic.

* *Ibid.*, p. 88.

† Reported in *The Survey*, August 8, 1914, p. 484.

‡ See Chapin, Robert C.: *The Standard of Living in New York City*. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1909.

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CAUSES OF IRREGULAR MINE WORK

The cause of this irregularity in miners' work is found partly in the nature of the product and partly in the artificial conditions resulting from the biennial agreement negotiations between the operators and the mine workers' union. An over-supply of coal miners also aggravates the situation.

Coal mined in and near Springfield is bituminous, of a grade which if left exposed loses, it is estimated, about 5 per cent of its heat value within three months after being mined. Since the demand for coal is greater in winter than in summer, bituminous coal miners have fairly steady work in the winter months but are idle a large part of the summer. Seasonal work seems, therefore, inherently a characteristic of the soft coal mining business.

Another factor in the irregularity of coal miners' employment, however, is not necessarily inherent. Every alternating year, pending the signing of a new agreement between the operators and the men, there is practically suspension of work. Negotiations toward a new agreement are not begun until the old agreement has almost expired, and there is never any certainty that the two contending parties will be able to get together and agree on terms. Accordingly, large consumers of coal, notwithstanding the loss in the heat value of the coal and the expense of extra handling, store up big supplies in the months just before the expiration of agreements. Thus in these pre-agreement periods the mines are unusually busy and the men have fairly steady work; but when the agreement expires the situation is reversed. The demand for coal for the two or three months following has been largely met, and for this period, therefore, the mines are practically shut down.

For the men and their families the results are serious in many cases. The extent to which the mining business is depressed in the months immediately following the adoption of new agreements is illustrated in Diagram 2, which shows the average per cent of the annual output of coal during the months of February, March, April, and May, for the last four agreement years for which data were available (1906, 1908, 1910, and 1912), and four non-agreement years (1907, 1909, 1911, and 1913).

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Finally the amount of unemployment among coal miners is aggravated by generally depressed conditions in the Illinois coal mining industry. The amount of coal mined in the state has greatly diminished, and even then, we are informed, there are fully three times as many coal mines running as are necessary to meet the demand for fuel. This over-activity makes for irregularity of employment. One-half of the coal miners of the state working steadily the year round would have been able to mine all of the coal that was being mined annually in the years immediately preceding the survey.

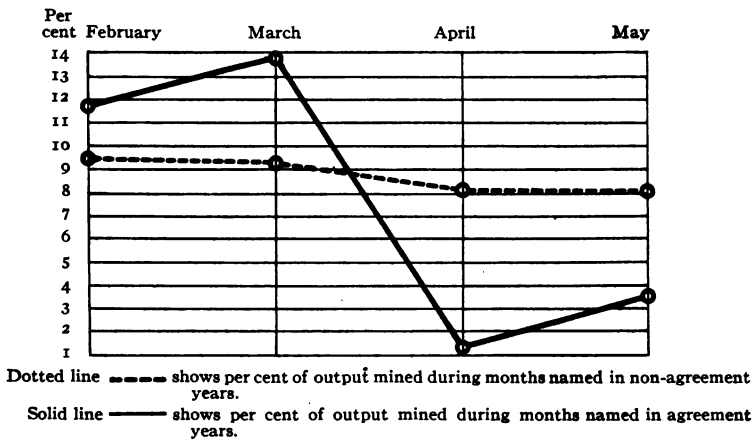


DIAGRAM 2.—AVERAGE OUTPUT OF COAL IN SELECTED MONTHS AS PERCENTAGES OF THE AVERAGE ANNUAL OUTPUT, FOR THE AGREEMENT YEARS 1906, 1908, 1910, AND 1912, AND FOR THE NON-AGREEMENT YEARS, 1907, 1909, 1911, AND 1913

FOR IMPROVED MINING CONDITIONS

For the improvement of conditions in the coal mining industry several suggestions were made before the Federal Industrial Relations Commission in a hearing held in Chicago in July, 1914. Among these were: (1) extension of opportunities for miners to work in other trades through the development of efficient free employment agencies, (2) regularizing of the industry through encouragement of summer production, (3) governmental control, such as exists in Germany, which would prevent the opening of new mines unless there is commercial need for them, and (4)

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unemployment insurance. All of these seem to us to deserve the fullest consideration.

The question of improvement in the work of the free employment agencies will be taken up in detail later in this chapter, where the results of a study of the Springfield employment office are presented.* That there is some possibility of improving the situation by the encouragement of summer production is suggested by the fact that in agreement years, when there is danger of a suspension of work, large coal consumers, in spite of extra expenses due to loss in the heat value of the coal and to its double handling, have found it commercially profitable to use coal previously laid in in large enough quantities to last them several months. As to unemployment insurance, the time when such a system of insurance can or will be set up in workable shape is probably not near enough to offer much in the way of immediate practical relief measures. It involves difficult questions, which will require careful study; but for that reason time should not be lost in making a beginning.

In addition to these possible measures to improve the situation, however, we would add the suggestion that at least the periods of unemployment on agreement years, over which the operators and miners have entire control, should be done away with. This might be accomplished if both sides could come to new agreements before the termination of old ones. To this end it is recommended either that negotiations between the operators and the unions be started earlier or that an arrangement such as was recently adopted in the anthracite district be made, which would provide for the continuance of work while negotiations are in progress or until it should become clear that a new agreement could not be reached. The objection to such a plan on the ground that the operators, if they anticipated that new agreements could not be reached or satisfactory terms be made, would be likely to increase the product of their mines before the termination of old agreements, might be met by a clause prohibiting extraordinary output during such periods without the endorsement of officials of the miners' union. Moreover, the operators under existing conditions do as a matter of fact in-

* See pp. 94-102.

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crease their output just previous to the expiration of the old agreements so that the adoption of early agreements could not make the present situation any worse, while at the same time it would offer some hope of improvement. The advantages to be gained from doing away with these artificial biennial periods of unemployment are that steadier work would be given to the number of miners that the industry can normally support, and others would not be encouraged to continue in it through the false hopes aroused by the occasional short periods of steady work.

MANUFACTURING AND MECHANICAL INDUSTRIES

Irregularity of employment, however, is not peculiar to mining, but to some extent confronts workers in other Springfield industries. Data gathered by the Springfield Commercial Association early in 1914 from the leading manufacturing and mechanical establishments of the city show something of the extent to which employes in these industries are faced by the problem of irregular employment. Table 4 shows the number of days of operation in 1913 for the 49 establishments reporting on the question.

TABLE 4.—NUMBER OF DAYS IN 1913 ON WHICH 49 SPRINGFIELD MANUFACTURING AND MECHANICAL ESTABLISHMENTS WERE IN OPERATION, WITH NUMBER OF EMPLOYES AT WORK ON DATE REPORT WAS MADE

Days in operation in 1913	Establishments	Employes
130 to 150	2	95
200 to 208	2	23
234 to 250	2	311
268 to 275	2	1,390
300 or more	41	1,952 ^a
Total	49	3,771

^a One small establishment operating 300 or more days did not report the number of employes.

Forty-one of the firms, it will be noted, operated 300 or more days, practically full time. Those operating less than 300 days,

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however, included some of the largest factories in the city. Eight firms operated 275 days or less. After allowing for Sundays and holidays and assuming that all of these worked the full 275 days, even then there would have been 30 days of idleness in the year. Over 400 workers were in establishments operating less than 250 days; and in all the 41 establishments working full time gave employment to only a small per cent more persons than the eight establishments operating more or less irregularly.

Moreover, the fact that a manufacturing place is in operation is not an indication that it is giving full time employment to all of its regular workers. There are many days on which this is not the case. For instance, when the data in Table 4 were gathered (that is, during the winter months of 1914) 40 out of 69 establishments which reported in operation were not running up to maximum capacity. At that time Springfield factories were suffering from a general financial depression so that the figures do not represent normal conditions; but the fact nevertheless that in the midwinter of 1914 more than half of the factories were running below capacity indicates that there are times when employment is even more irregular in Springfield than would appear from the figures for the whole year 1913, as shown in Table 4.

Regarding rates of pay in Springfield manufacturing establishments it is difficult to generalize, for outside of the earnings of unskilled laborers which run from \$1.75 to \$2.00 a day, there is no basis for classification, since wages vary not only from industry to industry, but from task to task; and the variety of tasks is innumerable. Wage conditions in the manufacturing places of the city, however, are fairly accurately described by observing the range of wage rates and the facts as to steadiness of employment in some of the more important Springfield manufacturing factories.

In one large plant, which produces agricultural implements, wage rates at the time of the investigation ranged from \$1.75 a day for unskilled laborers, to \$5.00 to \$6.00 a day, earned on piece work by skilled mechanics who welded plowshares on frames or operated drop or trip hammers. The earnings of construction men, who formed the largest group of workers in the plant, ranged from \$3.50 to \$4.00. This concern in busy seasons employs from

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450 to 500 men, yet when visited in the slack period less than 100 men were at work. The management charged the large decrease in number of employes to unusual business depression, but as a general thing the workers are idle for at least some part of the summer months. In order to make this seasonal employment less burdensome on the workers, and for other reasons, the company's employment policy is to favor men and boys from the country, some of whom in the slack summer period can return to the farm. The portion of the workers who do this, however, is probably quite limited. The others suffer the usual results of periodic unemployment.

Irregular or seasonal operation in manufacturing, even though demand for the product be seasonal, is not necessarily economical. In factories where extensive division of labor is impossible and where interest on stocks carried over considerable periods mounts into large figures, seasonal operation doubtless saves some money for employers. But in factories where the product permits of detailed division of labor and where its production calls for a high degree of factory organization, it may be questioned whether seasonal operation is economical even though demand for the product be irregular. While the cost of carrying a stock of manufactured goods until the market opens up may be considerable, the expenses incurred under seasonal operation from the loss of capable workers and destruction of factory organization in some cases will more than offset it.* This was true in the Springfield establishment referred to above, in the opinion of its manager, an efficiency engineer, who had been secured in an effort to save the concern from dissolution. He hoped in time to regularize the work so that steady employment could be provided for 300 men the year round. Unfortunately, however, the period of

* The losses caused by frequent changes in the labor force in manufacturing establishments have been made the subject of several careful studies recently by men in positions of management. One of these, W. A. Grieves, assistant secretary of the Jeffrey Manufacturing Company, Columbus, Ohio, stated in an address in December, 1914, before the Executives Club of the Detroit Board of Commerce, that after a careful analysis of data supplied him by 20 manufacturing concerns in the metal trades in middle western states the losses occasioned by changes in the working force, figured conservatively, averaged \$40 per man. The factors in the loss were: (a) expense incident to employing; (b) cost of instruction of new employes, no matter how competent; (c) extra breakage of tools by new men; (d) spoiled work; and (e) decreased production.

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financial depression caught the company just as its outlook began to clear up and it was driven to the wall before the plans could be carried out. Economy in business management, if no other consideration, would seem to demand that business be readjusted so that changes in the working force, whether the result of seasonal demands for products or of other causes, be reduced to the minimum.

Again, demand for steam engines and boilers one would expect to be fairly regular the year round, yet employes in Springfield engine and boiler factories are subject either to irregular employment, or to great irregularity in hours of labor. At one boiler factory, for example, the force of boilermakers, helpers, machine hands, and common laborers varied in the course of a year from 70 to 125 men. In the three winter months, December, January, and February, the smallest numbers were found at work. Wage rates in this establishment ranged from \$1.75 a day, paid to common laborers, to \$5.00 a day earned by a few highly skilled boilermakers. The largest group of workers, boilermaker helpers, earned from \$2.25 to \$3.00 for ten hours of work. Boys sixteen to eighteen years of age were considered as apprentices and received \$1.25 per day. Workers at this establishment often had opportunity to add to regular earnings by overtime work.

In a foundry and engine works, a force of from 90 to 100 workers was given fairly steady employment, the management in the busy season resorting to overtime work at increased rates instead of taking on extra hands. The upper level of wage rates for skilled workers at this place was $42\frac{1}{2}$ to 50 cents an hour for four expert tool makers. Below this level rates ranged downward to 20 to 35 cents for machinists and machine operators. In the foundry piece-work rates prevailed, some men earning as much as \$3.50 a day. As already indicated, there was some overtime work and occasionally seven day labor was resorted to.

In brickmaking, in which several companies are engaged in and near Springfield, seasonal employment, as far as manufacturing is concerned, is found at its worst. Work never lasts for more than eight or nine months a year and one large company employing about 110 men offered work on only 150 days during the year studied. These men, however, were largely unskilled

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laborers earning at most not over \$2.00 a day, which with their irregular employment must mean for many of their families nothing short of real penury.

One large establishment making electric meters and electrical supplies not long before our visit found it necessary to reduce its working force from 436 to 315. Working time, moreover, had been reduced from ten to nine hours per day, which also cut into wages. The highest paid workmen in this factory, the skilled machinists, under the piece-work method of payment which prevailed, made a maximum of from \$4.00 to \$5.00 per day. The lowest paid men received \$1.80 per day, except in the case of boys, who during an apprentice period received \$1.20. Earnings of women workers ran from about \$1.00 a day to \$1.90. The company calculated that the average wage among men engaged in assembling the parts of meters—the largest occupation group—was \$2.25 a day, and that among women similarly employed, \$1.40.

In two Springfield industries—the making of watches and shoes—the nature of the product rendered the work fairly regular. These industries were confined mainly to two large establishments which hire many women and girls in addition to the force of men. The watch factory employs normally about 540 men and 400 women. The piece-work method of payment prevails in almost all departments of the factory, and under the rates which were established at the time of this investigation the average earnings of all wage-earners were computed at \$2.40 per day. The earnings of the largest group of men varied from \$2.00 to \$3.75 a day, while a maximum of from \$40 to \$45 a week was paid some employed in certain delicate processes. Men apprentices if single received 75 cents a day; if married, \$1.00 a day. The majority of the women made from \$1.50 to \$2.00 a day, although some few in expert work made as much as \$65 and \$75 a month. Women apprentices were paid the same as unmarried male apprentices, or 75 cents a day. While the work at this establishment was reported to be steady the year round, the factory is usually closed for two or three weeks in the summer for a vacation and for a period of ten days at Christmas time, so that in 1913 the factory was actually in operation only 268 days.

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Although the demand for shoes is fairly staple, Springfield workers in this industry in the summer of 1914 were irregularly employed, due largely, in the opinion of both employers and workers, to unusual financial depression. Because of this the largest Springfield shoe factory, which when busy employs about 550 persons, was closed on Saturday during May and June, and this was expected to continue throughout the summer. One girl interviewed in the study of 100 Springfield wage-earners' families, stated that although ordinarily she could make \$8.00 to \$9.00 a week, she had earned only \$7.00 in the preceding week, while a sister had been laid off for periods ranging from one day to two weeks in the period of her employment by the company. Another girl working at piece-work rates, as were nearly all employes at this factory, could make as much as \$14 a week when she had plenty of work, but complained that she had not been able during the past year to average over \$1.00 to \$1.25 a day. During the preceding week she had been idle two days.

Under the piece-work system, which, as has been indicated, exists in nearly all Springfield manufacturing establishments, there is ordinarily more or less criticism by the workers as to methods of fixing rates of pay. However, among the workers interviewed a large amount of this dissatisfaction was felt toward one factory. The cause of the trouble was not very clear. As nearly as could be ascertained the workers appeared to believe that the management was pursuing a policy in fixing piece-work rates which either directly or indirectly reduced earnings as soon as they exceeded a given amount. The result was that workers performed their tasks at less than their highest efficiency. A machinist, for instance, whose earnings after long service averaged about \$20 a week, said that he could make up to \$5.00 a day when there was plenty of work but "the company won't allow it. If a man makes much over \$3.75, the rates are cut." A young woman referred to \$2.00 as a limit to the earnings of women and complained that piece-work rates were fixed without careful calculation so that equally efficient workers earned entirely different amounts. A youth still in the early months of his industrial experience stated that he turned out only about half as much work as he could because he feared a cut in rates. It is

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most unfortunate both for the company and the workers when a conviction of this kind begins to be felt.

The fixing of fair rates for piece work is an important matter and is claiming a good deal of thought in efficiently managed establishments. It involves the greatest care, and it is already clearly established that rates, either from the point of view of greatest efficiency or of fair dealing, may not be changed without thorough consideration of the work processes to be paid for by the new rates, and certainly not without fully informing the workers. An important part in efficient rate fixing is the endeavor to simplify and explain the method sufficiently so that the workers may check themselves up and test for themselves the accuracy of the system. Moreover, it would seem clear that new rates should be fixed only after thorough experiment and careful consideration. This applies especially in cases where reductions are involved. There are very few things a man resents more than the reduction of his earnings as a consequence of what he believes to be his own efficiency.

BUILDING AND CONSTRUCTION WORK

Men employed in the building trades, in construction work, in street paving, and similar outdoor work are affected by weather conditions and change of season. One large company, for instance, from March till November employs 200 men, chiefly unskilled laborers, at asphalt paving; but during the three or four months following, when outdoor work is impossible, only 15 are retained. The laid-off men haul coal and perform other odd jobs. Moreover, during these winter months the company reduces the rates of pay. For example, a skilled man who gets \$25 a week for nine months is paid only \$12 a week for the three winter months. In choosing the few men who are to be kept on the payroll, men who are handy with tools have the best chance; of the rank and file of workers—common laborers paid 20 cents an hour or \$1.80 for a nine-hour day—practically none are kept during these slack months. In the busy months, too, the men lose a day's pay whenever it rains hard enough to prevent work; and there are occasional periods of idleness between jobs, although the company tries to transfer men from one job to another with

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as few gaps as possible. Even so their total wage for the year, however, falls considerably below \$500. During the winter, when the large majority are unemployed, the company furnishes coal to its regular men. When they return to work, a dollar is deducted from their wages each week until the bill is paid.

Among men in the building trades—carpenters, painters, plasterers, paperhangers, plumbers, gas and steam fitters, sheet metal workers, bricklayers, and stone masons—who, in 1910, numbered about 1,100—irregularity of employment to a great extent offsets the high wage rates which these workers have gained through their unions. This was emphasized both in information secured from labor union officials and from the workers themselves. The bricklayers, for example, earn an hourly rate of 70 cents, a great deal more than workers of the same capacity and skill were able to earn in any of Springfield's factories; but their work is seriously interfered with during the winter months. Painters and paperhangers earned 50 cents an hour, but the secretary of the Brotherhood of Painters, Decorators, and Paperhangers described their work as irregular. A carpenter who in the busy season earned \$4.80 for an eight-hour day was described as "laying around all winter." Another illustrative case was a carpenter's helper in a planing mill, earning 20 cents an hour for an eight-hour day, who had such irregular work that had it not been for the steady earnings of a sixteen-year-old son the family could not have made ends meet.

In the spring, housecleaning and repairing and building operations demand the full time of every available building trade worker, but in the fall and winter men are glad to find occasional jobs for a day or two. An experienced painter stated that with steady work as janitor of a railroad depot at \$40 a month he really earned more than he earned as a painter at 50 cents an hour with regular work for only a few weeks in the spring and fall.

TRANSPORTATION

Regularity of employment in public transportation was in striking contrast to the irregularity of employment in the building trades. The census of 1910 credited Springfield with approximately 1,000 steam railway and 200 street railway employees.

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The situation as to wages in these two branches of transportation, however, differed widely. On the steam railroads the men had been able through organization to bargain for fairly good wage rates. For instance, of two switchmen who were interviewed and whose cases were illustrative, one was earning \$115, the other \$130 a month. A foreman was paid \$63 and an inspector \$50 a month, while a machinist earned \$22 a week and a fireman \$18. Hourly rates of pay were generally higher in the building trades than among railway workers, but the railroad men received greater annual incomes because of the longer work day, seven-day labor, and the greater regularity of work prevailing in the industry.

Organization of the street railway employees in Springfield, on the other hand, had never been accomplished. This was reflected in the wage rates which prevailed. Motormen and conductors were paid the same rate. After two trial weeks without pay they began receiving wages at 19 cents an hour, and were increased one cent per hour each year until they reached the maximum of 24 cents. The custom had also been established of giving each man a suit of clothes each year after five years of service, and after ten years, an overcoat in addition. During State Fair week, when the cars are specially crowded, they were paid an additional two cents an hour. Thus with seven-day labor their weekly earnings ranged from \$11.97 a week for beginners on the nine-hour shift to \$16.80 for experienced men on the ten-hour shift. Occasionally men earned extra money by making special trips outside their regular hours.

LAUNDRIES

The five laundries in Springfield, which were employing women chiefly, seemed to be relatively little affected by seasonal or financial depressions. A regular force was given steady employment, which at certain times of the year—at Christmas and during State Fair week—was increased by a few extra workers. In spite of the ten-hour day, the earnings of the women were low. The beginning wage for girls sixteen years of age in one establishment at the time of this inquiry was nine to 10 cents an hour; increases were made as workers gained experience until a maximum of 13 to 14 cents was reached. Much of the laundry work in

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Springfield was paid for at piece rates, but the earnings of piece workers did not greatly exceed those of workers paid by the hour. A glance at the payroll in one laundry showed several girls earning \$4.50 a week, others as high as \$12, *but the average sum was about \$6.00*. The wages paid to men were somewhat higher—\$2.00 a day to men who operated washing and drying machines, while the head washer in one laundry earned \$3.00 a day.

Reports from individual workers corroborated the statements of employers. A shirt bosom ironer, for instance, with three years' experience, earned from \$6.50 to \$7.00 a week; a sorter, twenty-two years old, earned \$6.00 to \$7.00; a shaker earned \$6.00 a week; a mangle girl 12 cents an hour or \$7.20 a week; a marker with ten years' experience rarely made over \$8.00 a week.* Thus the low wage rates in this industry to a considerable extent counteract the advantages accruing through regular work the year round.

MERCANTILE ESTABLISHMENTS

In mercantile establishments conditions as to wage rates and regularity of employment were much the same as in laundries. Rates are low when compared with the earnings of factory workers, but for most employes the work was regular the year round. The exception was where extra workers were brought in during special rush periods, such as State Fair week and Easter and the Christmas holidays; and though the number of these workers was sometimes large, the duration of their employment was brief. One department store during the Christmas holidays increased its force from 115 to 165 workers—43 per cent; another increased its force 10 per cent during the rush periods. A five-and-ten-cent store with a normal force of 35 increased it to 62

* A report of the Social Survey Committee of the Consumers' League of Oregon issued in January, 1913, gave the following rates of pay of laundry workers in Portland. The Springfield rates are seen to be lower. If there is any difference in the cost of living between the Pacific coast and the Central states, it is probably not sufficiently great to balance the differences in wages.

Markers.....	\$1.50 per day
Starch-room workers.....	15, 17½, and 20 cents per hour
Manglers.....	\$1.35 to \$1.50 per day
Ironers.....	\$1.50 to \$2.00 per day
Folders.....	\$1.25 to \$1.35 per day

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during the last State Fair week, and to 114 during the Christmas rush. None of the stores visited reported any difficulty in securing extra help during such periods. There seemed to be many persons in the city ready to take advantage of a few odd days of employment which held out no hope of developing into anything permanent. In fact, there seemed to be no dearth of women and girls anxious to become sales clerks, for all the stores visited kept rather extensive waiting lists and were forced to turn away many applicants. This liberal margin of available labor undoubtedly accounts to a large extent for the low wage rates which obtain in many Springfield stores.

All the stores, however, must not be classed together, for some which deal in relatively higher priced commodities need a more capable sales force than others—particularly than the five-and-ten-cent stores—and consequently pay higher wages. Except for one woman who received \$25 per week and whose duties included more than those of an ordinary sales clerk, the wages of sales girls in the department stores of Springfield ran from \$4.00 to about \$9.00 a week. The manager of one department store stated that the average wage of his sales girls was from \$6.00 to \$7.00; the superintendent of another fixed the average for his sales girls at from \$7.00 to \$8.00. A sales girl interviewed in her home who had been with the last named store for nine months and who was earning \$4.50 thought that most of the girls got from \$5.00 to \$6.00. The manager declined to furnish detailed information regarding wage rates. At a third store it was stated that sales girls made from \$7.00 to \$10. Of nine in this store receiving less than \$7.00, the manager said six earned \$6.00, the other three, \$4.00. A chief sales girl in one part of this store, visited in her home, had been with the store for five years and was earning \$7.00. Most of the sales girls, she said, got from \$4.00 to \$5.00.

The following list shows the wages received by nine department store girls interviewed in their homes during the course of this investigation. These girls were members of the families of wage-earners interviewed for other purposes and so were selected entirely at random.

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Age	Kind of work	Years in store	Weekly wages
21	Chief sales girl	5	\$7.00
20	Sales girl	2	6.00
20	Office worker	4	6.00
18	Sales girl	4	6.00
20	Sales girl	... ^a	5.00
22	Sales girl	2	5.00
17	Sales girl	3/4	4.50
17	Stock girl	2	4.00
17	Office worker	1	4.00

^a Exact period could not be stated.

Of these girls, two had attended high school, one had taken a course in business college, and two were attending evening school, all of which seemed to indicate some ambition to advance. Yet, as the table shows, the weekly wage even after several years at work was very low.

In addition to the force of sales girls the department stores employed many younger girls as check girls and bundle wrappers. At two of the stores these girls started at \$3.00 a week. At a third the manager said they started at \$2.50, but the chief sales girl, above mentioned, was sure some were still starting as low as \$2.00.

FIVE-AND-TEN-CENT STORES

In three five-and-ten-cent stores the number of sales girls varies from 21 in the first store to 30 in the second and 35 in the third. As in the department stores, however, additional workers were taken on at State Fair week and the Christmas holidays. One manager more than tripled his force during the midwinter rush period of 1913-14. These stores, moreover, were doing an unusual business on Saturday and were regularly taking on extra girls, one establishment nearly doubling its sales force for that one day in the week.

No check girls or bundle wrappers are employed in the Springfield five-and-ten-cent stores, but *the wages of sales girls were very low. The average wage was from \$4.00 to \$5.00 per week.* One store started new recruits at \$4.00, one at from \$3.60 to \$4.00, and the third sometimes started them at \$3.50. The maximum

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rate for most positions was \$5.00, but a few special tasks, like work at the music counter, which required piano playing, paid more. *After seven years' experience a sales girl in one of these stores was earning only \$5.00.*

All three of these stores employed only girls who were living at home. "They are better girls and aren't so apt to go wrong," explained one manager. Another was more frank: "A girl can clothe herself on what she gets," he said, "but she can't pay board without going wrong or stealing. *We only want girls who live at home and don't have to pay board.*" As a matter of fact, girls frequently did give way to the temptation to steal—a temptation made more compelling by their low wages. This happened frequently enough to lead the management at one store to employ one girl at \$5.00 per week whose principal duty was to report sales clerks who tried to supplement their wages by appropriating merchandise to their own uses. When such cases were discovered there was no publicity. The stores want none. The girls were quietly dropped without being told the reasons for their discharge—a procedure which itself is open to serious objection since it does not afford the accused any chance to vindicate herself in case she has been falsely accused and which may therefore do her great injustice.

Because of the low wages paid in these stores the girls leave as they grow older and are forced to become to a greater degree self-supporting. Most of the sales girls were from sixteen to eighteen years old, some even younger, and the managers had seized upon this fact as an excuse for paying low wages. Their claim was that five-and-ten-cent store sales girls were merely serving their apprenticeships preparatory to advancement. "When girls come to me," said the manager of one store, "and say that they have an offer of \$6.00 or \$7.00 from one of the department stores, I tell them to go by all means, for their work here has been only an apprenticeship." Their places are filled by girls who begin at the lower starting rate. From our observation of these stores, however, we have very serious doubts as to whether much experience of real value is acquired in the so-called apprenticeship training; for five-and-ten-cent store sales girls get little training in the selection or display of goods, in knowledge of stock or even in

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making out sales checks, and most important of all in the psychology of selling, all of which are essential in department store salesmanship. One wonders, moreover, whether the girl who after seven years was receiving \$5.00 a week was considered as still serving an apprenticeship!

WOMEN'S WAGES

PAY \$3.50 to \$4.00 beginning wage
\$5.00 maximum except for
• 5 out of 86 girls

A manager said:
"We choose girls who live at home
because a girl can't pay board on
what she gets and not go wrong
or steal"

The Excuse Given
"Clerking in a 5 & 10¢ store is an
apprenticeship for clerking elsewhere"

BUT WHAT DO THEY LEARN?

They don't make out sales checks
They don't judge or select goods
They don't display articles for sale

WAGES IN FIVE-AND-TEN-CENT STORES
Panel from Springfield Survey Exhibition

That such wages are too low is too clear to need argument. The best method toward increasing wages in these stores, however, is not so clear. The workers are neither organized nor protected by

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minimum wage laws, and the fact must be acknowledged that the wages are very largely the result of the working of the laws of demand and supply. Employers, as a rule, pay no more than is necessary to get workers; and these take the highest paid positions which offer the kind of work they wish to do and can do. It happens that the position of sales girl in a five-and-ten-cent store requires no experience, little real ability, and not a very high grade of personal equipment in manner and bearing. Obviously there are a large number of persons not able to command other positions who can do this work with reasonable satisfaction. A good many girls, moreover, who might make better wages in factory work, are either not strong enough or really prefer to be sales girls at lower wages. The result is that the supply of girls wishing to get work in the five-and-ten-cent stores is large, and employers are able to secure all they need at a very low rate of pay. One manager even thought he was paying more than he needed to. "I have no difficulty in getting girls," he said; "I have difficulty in keeping them away. Young and old apply, five and six a day; and I could hire all I want at \$2.50 a week."

It is not surprising, under such conditions, that wages are low; and except in rare instances it does not seem likely that employers will very soon raise wage rates voluntarily to any appreciable extent above the level fixed by supply and demand. Increase will need to come through some means which will apply to all employers alike and which will make the wage advances compulsory.

SUMMARY AND RECOMMENDATIONS FOR IMPROVEMENT

Regarding wages and regularity of employment, it should be remembered that the income of workers must be measured not only by wage rates but also by the regularity of employment. Annual earnings are a better index of wage conditions than rates per day or week.

Coal miners represent one of the largest occupation groups in Springfield, roughly 2,500 residents in the city being so employed. Wage rates are determined biennially by agreements between the operators and the unions. The great majority of workers are paid by the ton of coal mined. Many of the miners (exclusive

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of miners' helpers and other mine workers) are able to make as high as \$5.00 a day when there is plenty of work. But work is very irregular; out of more than 300 possible working days in the year ending June, 1913—the last year before this investigation—the mines in Sangamon County operated an average of only 181 days, or only three-fifths of the time. Drivers, timbermen, and others paid by the day earn less than miners whose pay is by the ton of coal mined, and therefore are affected even to a greater extent by the irregularity of the work. All are affected also by the fact that on many days when the mines operate they run at less than capacity and do not give employment to all the men in their employ.

Some of the workers during slack periods try to fill in the time with other work, but there are difficulties against accomplishing much in this way, chief among them being that the free days are scattered irregularly through the year and that few of the men possess skill in other occupations. The great majority find it either impracticable or impossible to combine much other work with mining. *The result is that wages for a large proportion of the men are below the minimum needs of an average family of five persons as shown by and based on budget studies made even before the recent advances in the cost of living.*

The cause of the irregular mine work is found partly in the nature of the Illinois coal, which if left exposed loses some of its heat value and therefore production is made to vary with the varying seasonal demand. Another cause is found in the biennial agreements which result in overproduction in the months immediately prior to the expiration of old agreements. The operation of too many mines is also a factor.

Irregularity of employment was found also in the manufacturing and mechanical industries. Out of something over 3,700 employes in 49 establishments for which data were available, about half had full-time employment in 1913; workdays for the other half ranged from 130 to 275 for the year. Over 400 employes were in establishments that operated less than 250 days. And some of the establishments did not operate on full time on all the days they were open. Brickmaking was the most seasonal of the industries in the manufacturing and mechanical groups.

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In a few of these industries attempts were being made to reduce the irregularity of employment, but these had not got very far.

Wages in these work places varied so much from industry to industry and from one job to another that exactitude is impossible, except that *unskilled labor received from \$1.75 to \$2.00 a day—a large proportion not over \$1.80*. This wage together with unsteady work kept men always on the border line of poverty, with the result that in emergencies, sickness, accident, or unemployment, their families were forced to seek charitable aid. This amounts in many cases to the subsidizing by the community of establishments where wages are so low that the public and charitably inclined people have to make up the wage deficits.

In the groups above the unskilled workers the figures, as far as they permit classification, appeared to show that the great bulk of the employes received wages ranging from \$2.00 to \$3.75. A small proportion received as much as \$5.00 and \$6.00 a day. In a few cases where earnings were determined on the basis of piece work some dissatisfaction was found regarding the methods used in fixing the rates.

Work in the building trades, construction work, and in street paving is very much affected by weather conditions and change of season. Wage rates are fairly high in these trades, but the large amount of idle time brings the yearly income down to a point where many families find it difficult to meet ordinary household expenses.

Among the 1,000 to 1,200 steam railroad and street railway employes there was much greater regularity of work. Wages among the steam railroad men who were organized ranged from \$12 to \$30 per week. Wages of the street-car men ran from \$11.97 to \$16.80 per week. *The seven-day week prevailed for both groups of railway workers.*

Laundry work was fairly regular through the year, but wages were very low, especially for the women workers, who averaged about \$6.00 per week.

In mercantile establishments work was also quite regular the year round but rates were low. The weekly wage for sales girls in department stores averaged between \$5.00 and \$6.00. *A number of check girls and bundle wrappers received only \$3.00 to \$4.00.*

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Wages in the five-and-ten-cent stores were still lower, the average for sales girls being from \$4.00 to \$5.00 per week, a rate which some of the store managers inferentially acknowledged could be maintained only because most of the girls lived at home and had no board to pay. The wage was clearly too low under any circumstances.

MEASURES RECOMMENDED

Consideration of a number of measures for improving wage conditions in the mines has already been urged; among them, greater effectiveness in the work of public employment agencies; regularizing the industry through larger summer production; government regulation which prevents the opening of new mines until there is commercial need for them; earlier negotiations toward agreements between the operators and the unions; and the appointment of a commission to take up the study of unemployment insurance. The first of these measures, which relates to the work of the state employment agencies also, applies in greater or less degree to the other occupations besides mining, and because of its importance needs further consideration.

STATE FREE EMPLOYMENT OFFICE

As far as income is affected by unemployment, some relief should be afforded through the development of efficient machinery for bringing together the man out of work and the employer needing workers. This of course is the function of the state employment offices.

In the eight public free employment offices located in the larger cities of Illinois, the state had thus made some provision up to the time of the survey for helping the man out of work to find employment; but the office located in Springfield at least had not reached a high state of efficiency.*

* In the period between the holding of the Springfield Survey exhibition, where the facts on the Springfield employment office were first presented to the public, and the time of publication of the full report, an Illinois commission on unemployment, consisting of three representatives of labor, three of employers, and three of the public, was established to report to the next (1917) legislature. It is without funds, however, as its appropriation has been declared illegal by the courts. In connection with the state employment offices a general advisory board has been established to investigate and deal with unemployment. The appropriation for this board is too small for much to be accomplished.

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The office was centrally located at 307½ South Sixth Street, on the second floor of a business building. The staff consisted of a superintendent, who was formerly a mine manager,* an assistant superintendent, who was formerly a jail keeper, a woman



SPRINGFIELD EMPLOYMENT OFFICE

The office is on the second floor; the entrance on the ground floor, used by both men and women, is shown at the bottom of the picture.

A careful study of the Springfield office in early 1914 resulted in the outlining of a number of detailed recommendations for increasing the efficiency of the office (see page 101). It is also urged that all the state employment offices be put under a bureau of the new Department of Labor and Mining recommended in this report

clerk in charge of the woman's department, a stenographer, and a janitor. Only the janitor and stenographer were required to

* This superintendent has died since this investigation was made, and a new one has been appointed.

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pass civil service tests. The others were appointed by the governor. Each new state administration, therefore, means a new office force, a situation which almost necessarily interferes with efficient conduct of the work. The cost of maintaining the Springfield office in the year ending September 30, 1913, the last before our investigation, was reported to be \$5,473.

According to the law under which this office was established its activities were to extend not only to manual occupations, but to "professional service and all other legitimate occupations." On account, however, of the lack of vigor and grasp of possibilities with which the office had been and was being administered, the class of labor served by it was almost entirely the unskilled. Of 3,773 positions reported to have been secured for men in the year ending September 30, 1913, practically half of the applicants, or 1,912, were recorded as getting jobs as "laborers," 315 as handy-men, 262 as farmers or farm laborers, while the positions of the remainder, about one-third of all the applicants, were divided in the main between those of dish washers, house men, porters, teamsters, and drivers. Almost no positions were secured in factories or offices and few were secured in the building trades.

Of the 1,194 positions reported as secured for women, 1,150, or over 95 per cent, were in domestic and personal service—chiefly as day workers, house workers, or laundresses in private families, hotels, and restaurants. A few positions were secured in offices, but none in stores or factories. It was evident that the field of service of the free employment office had been restricted largely to the service of unskilled labor. While no one would dispute the importance of this kind of assistance to laborers in the unskilled trades, it was nevertheless clear that there were other important groups who needed the service also, and this was particularly true in Springfield, where there are no private employment agencies operating.

The work of the Springfield employment office for the year ending September 30, 1913, is shown in a pamphlet issued by the Illinois Bureau of Labor Statistics. A few facts taken from this report are presented in Table 5.

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TABLE 5.—RECORDED APPLICATIONS FOR EMPLOYMENT AND FOR HELP FILED WITH THE SPRINGFIELD FREE EMPLOYMENT OFFICE DURING THE YEAR ENDING SEPTEMBER 30, 1913^a

Sex of person applying or sought	Applications for employment filed	Positions secured		Applications for help filed	Workers supplied	
		Number	As a per cent of applications		Number	As a per cent of applications
Male	3,834	3,773	98	3,923	3,773	96
Female	1,213	1,194	98	1,549	1,194	77
Total	5,047	4,967	98	5,472	4,967	91

^a Taken from Free Employment Agency report issued by Illinois Bureau of Labor Statistics, 1913.

Taken as they stand, these figures make an astonishingly fine showing; 98 per cent of those applying for employment were given employment! The figures, however, are utterly misleading. Ordinarily "applications" for work were recorded at the Springfield office only when there was on file an employer's request for help of some kind. In other words, unless the jobs were already in sight, persons seeking work did not as a rule file their "applications." "Applications filed," therefore, do not represent the total number of persons applying for work. Of those applying no record was kept.

Referring to the table again, "positions secured" is a misnomer, for it referred to positions to which applicants were *referred*, but experience in free employment offices in other states shows that there is a great discrepancy between the number referred to jobs and the number securing employment. Some never apply for the positions to which they are referred. Some arrive to find the places already filled. Some applicants do not meet the approval of employers, and in other cases workers themselves, upon learning more regarding the jobs, decide they would not like the work. As a matter of fact those in charge of the Springfield public employment office had no real information as to the number of positions actually secured for workers.

These erroneous figures would not be of much importance if it was merely a matter of false statistics, but it is more serious

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than that. The figures revealed two vital weaknesses in the administration of the free employment office: first, that there was no follow-up work to see whether applicants referred to positions actually secured them; second, that in cases where no position was open for an applicant when he applied, no further effort was made to secure work for him.

The seriousness of the first condition is illustrated when an employer asks that a workman be sent him and the free employment agency sends a man who never shows up. When this happens once or twice the employer comes to look upon the employment office as undependable, and ceases to use it when he wants help. Indeed, we may go further. The duty of the employment office is to fill the position no matter how many persons need to be sent. In every case, therefore, in which the worker sent fails to fulfill the requirements of the position the public employment office, if it ceases its effort to supply some one who will meet the requirements, falls below its responsibility to both the employer and to other workers.

The importance of the second shortcoming of the Springfield agency is illustrated when an artisan applies for work and no request calling for a man of his trade is already on file. No record is made of this application for a job and thus he receives no help even though half an hour after he leaves the office an employer calls for just such an employee. The absolute necessity of keeping systematically filed and workable records of all applications for work, if the office aims at efficiency, and at handling a reasonable share of the work that ought to come to it, is too obvious to require argument and too elementary to require that it be dwelt upon.

Further evidence that the office was falling short of its opportunity and responsibility was found in the fact that as soon as application blanks had been entered in the register prescribed by law, the blanks were piled—not filed—in a store room where they had been accumulating since the office was opened five years before. If an applicant appeared a second time, a second blank was made out and he was compelled to answer again the same list of questions asked on his first appearance; and the method was the same for later visits. Since these were not filed in a way to

INDUSTRIAL CONDITIONS

allow for easy or quick reference, the blanks soon became difficult to locate; and with no index system to assist in handling applications recorded on the official register, it is evident either that the office procedure was not workable or that when used at all it involved an unnecessary waste of time.

This procedure, or lack of system, moreover, works against the usefulness of the employment agency in another way. It does not allow for such consideration of the data recorded as would help toward a better understanding of the needs of the unemployed on the one hand and of those needing workers on the other. Some agencies in other states have discovered that systematic records can be made to furnish information regarding wages, hours of work, steadiness of employment, willingness of employers to co-operate with the agency, and facts which should be of great value in meeting employers' precise needs and in placing applicants in the right kinds of jobs. That is a long step ahead of the method found in the Springfield office where the person sent to employers was as a rule the first chance applicant who happened into the office asking for the kind of work described by them.

SPRINGFIELD AND MILWAUKEE EMPLOYMENT OFFICES

Comparison of the Springfield free employment office with the free employment office of Milwaukee, Wisconsin, showed how the work in Springfield might be made effective. There the janitor and stenographer were the only employes appointed by civil service tests; in Milwaukee all employes are so selected. In Springfield, except for a small entryway, there was no waiting room for male applicants; in Milwaukee separate offices are maintained for men and women and there are two waiting rooms for male workers, one for unskilled labor and farm hands, the other for skilled workers. Experience has shown that this latter provision is necessary if an office is to serve both skilled and unskilled workers. In Springfield, as has been said, applications for work were ordinarily accepted only when applicants could be referred immediately to positions; in Milwaukee effort is made to register all applicants and to find work for them. In Springfield application blanks were piled away in a store room; in Milwaukee they

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are placed first in a "waiting" file, and when positions are secured they are transferred to a permanent file, so placed as to be conveniently referred to by the clerk who receives applications. In Springfield when an applicant was sent to a position his record was closed; in Milwaukee he is given an unstamped post card to be delivered to the employer, who is requested to post it after indicating whether the applicant is given employment. If in the course of a few days the card has not been returned, the



MEN'S DEPARTMENT, MILWAUKEE EMPLOYMENT OFFICE

The room in front is for the accommodation of the skilled male workers seeking employment, and the room at the back, which has a separate entrance, is for the unskilled workers, farm hands, and other laborers. The registration desk and the cabinets of the card-filing system are also shown in the picture

agency communicates with the employer over the telephone to discover the result. Only after a position is actually taken is it counted among those filled. In Springfield no well-considered plans had been laid to gain the co-operation of employers and workers; in Milwaukee an advisory committee of representative employers, employes, and public officials has helped to gain for the public employment office widespread interest and co-operation. As a result of its methods large employers of labor are beginning to rely upon the Milwaukee bureau in selecting their help. On

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the other hand, of all the factory and store managers and other employers interviewed in the course of this investigation, and it was a goodly number, not one took the Springfield free employment agency seriously or thought that it was rendering an important service. It was evident that its methods needed radical revision before the office could command the confidence of either employers or employees.

Its needs may be listed as follows:

1. The selection of officers by civil service tests to secure more efficient management and to prevent a complete change of force with every change in state administration.
2. An advisory committee of representative employers and workers in order to secure better co-operation between employers, workers, and the bureau.
3. Rearrangement of office space so as to supply an adequate waiting room for applicants. Separation of skilled from unskilled workers would help the bureau to do more effective service for skilled men.
4. An adequate record system of applicants for work and for help. Applications not yet filled should be kept in "waiting" or "current business" files, others in permanent files.
5. All applications should be registered.
6. The scope of activities should be extended to include skilled as well as unskilled workers.
7. More adequate funds should be made available for advertising in Springfield and neighboring districts, and to provide salaries large enough to command first-rate ability for the staff.

The Illinois Efficiency and Economy Committee, which has reported since this subject was briefly touched upon in the Springfield Survey Exhibition, recommends the reorganization of the eight independent state employment offices under a bureau of a new department of labor. We concur in this recommendation. But whether or not the recommendation is followed in all particulars, the need for some form of central control over these public offices is clear. Such control would not only promote more efficient administrative methods, but would make possible effective exchange of information between bureaus so that not only in the city, but throughout the state, workers could be sent where needed; and as far as possible long periods of unemployment,

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which so greatly reduce the annual earnings of so many workers, might be eliminated. The institution of improved methods in the Springfield office should not, however, wait upon this centralization plan.

WAGES OF SKILLED WORKERS

As to the wages of skilled and semi-skilled workers in the manufacturing and mechanical industries, the building trades, and on railroads, one hope for male workers who at present are not members of the union is to be found in labor organization. Some of the Springfield unions in the past have been relatively effective in improving wage conditions, and deserve the consideration of all workers.

Facts brought out by recent inquiries which show large losses to the business due to frequent changes in the labor force, and other studies and experiments, are tending to prove that the employer, as well as the worker, suffers when work is irregular and spasmodic. Economy in business management appears to demand that business be readjusted so that changes in the working force, whether the result of seasonal demands for products or of other causes, be reduced to the minimum.

There will undoubtedly still be a certain amount of work, particularly building and construction work, track work, and street paving, which will continue to be more or less seasonal. The most promising relief in these trades seems to be in the development, as already recommended, of a much higher state of efficiency in the Illinois public employment agencies.

WAGES OF UNSKILLED WORKERS

The problem of increasing the wages of unskilled male workers in Springfield, and of many women workers, especially in laundries, five-and-ten-cent stores and restaurants, and the task of reducing the irregularity of their employment is by no means simple. Up to the present the labor union movement has made but little progress with this type of workers. They for the most part are uneducated and to a great extent are casual laborers. In cases of strike they also are easily replaced. Organization among them has been almost impossible, and they have

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had to accept wages determined by the supply and demand of the labor market. The result has been insufficient pay. Organization among them, however, should not be considered hopeless. The unions should face this as one of their serious problems, and see in it both a responsibility and an opportunity for rendering service to a group of workers less able than they to help themselves.

In the case of sales girls in the mercantile stores and of some other low-paid women workers, another measure strongly recommended is the utilization of public opinion expressed either through constant objection to low wages in specific cases or through consumers withdrawing patronage from stores paying low wages, or both. The first method, as far as five-and-ten-cent stores are concerned, however, loses some of its force, since these stores in Springfield are owned by large corporations with headquarters elsewhere. It nevertheless would have effect even in these cases. The other method, sometimes worked out through consumers' leagues, will bring results if well organized and consistently pursued. But still more promising action toward raising low wages in five-and-ten-cent stores seems to be through minimum wage legislation which would insure to girls giving the whole of their working time to their employers at least enough for self-support.

What is here said about means toward wage increases of five-and-ten-cent store sales girls applies with almost equal force to all low-paid women workers. Minimum wage legislation seems to offer the most promising method for securing a wage adequate for self-support of girls who give the whole of their working time to their employment. Such legislation has been enacted in Arkansas, California, Colorado, Kansas, Massachusetts, Minnesota, Nebraska, Oregon, Utah, Washington, and Wisconsin. While it has not been in operation long enough in these states to permit of final conclusions, where given a fair trial, the indications are that it is improving industrial conditions among women workers.

In addition, some help, although of a slower kind, can be secured through various indirect methods. The wage problem is

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not entirely a local problem, but its solution depends in large measure, of course, upon the action of localities.

The support of citizens of Springfield is therefore urged for a number of measures which will better the condition of the low-paid workers in Springfield as well as elsewhere. Among these are: the prohibition of child labor with the consequent probable increase in the demand for, and in the wage of, adult labor; a corollary of this, the development of better industrial education for children now of school age, thus preparing the coming workers for better paid and higher types of work; the establishment of better wage rates for manual labor on public works; and the establishment of minimum wage standards.

Most of these measures should act almost immediately in bringing some measure of relief to the low wage and unemployment situation. The time when a system of unemployment insurance will probably be instituted, if at all, does not seem near enough to offer much in the way of immediate practical improvement of conditions. Thorough study of this as a relief measure, nevertheless, should not be delayed, and is strongly urged.

V

HOURS OF LABOR

From two points of view hours of labor have bearing upon social welfare: first, because long hours of work seriously affect the workers' wellbeing, and consequently are intimately related to public health; second, because they affect the extent and possibilities of wage-earners participating in the civic life and activities of the community.

As to the first, fatigue is the result of the poisoning of the body by waste substances produced through physical activity. This has been demonstrated scientifically by running a dog until exhausted and then transfusing some of its blood into a dog that had not been exercised. The latter immediately showed signs of fatigue.* Work produces the poison of fatigue, and, as every one knows, if work is continued long enough a point of exhaustion is finally reached—the fatigue poison getting the upper hand. Of course the body attempts at once to rid itself of these toxic impurities. While work is continued, however, in most occupations at least, waste products are created faster than they can be thrown off. For this reason people are unable to work on indefinitely but are forced to take alternate periods of work with periods of rest. If good health is to continue, these periods of rest must be sufficient to permit the body, by functioning normally, to throw off the fatigue before taking up new work. Otherwise cumulation of fatigue will gradually exhaust vitality and undermine health, making the victim unusually subject to disease and premature old age. It is upon the basis of such facts as these that the United States Supreme Court has upheld laws restricting the hours of women and children as the legitimate use of the police power of the state for the protection of public health.

* For a full discussion of the nature and effects of fatigue see Goldmark, Josephine: *Fatigue and Efficiency*. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1912.

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As to the effect of hours of work upon citizenship, it is part of the principle of democracy that people shall have leisure time to keep themselves informed and to maintain an intelligent interest in public affairs. The barrier against developing such civic interests set up, for example, by the twelve-hour day and seven-day week in the steel industry, which still obtain to a considerable extent, is one of the grounds upon which the industry has been severely condemned in recent years. With full allowance for all the mitigating circumstances, the fact nevertheless remains that such conditions, in addition to other unwholesome effects, destroy and prevent the best community life.

As in the case of wages, comprehensive information regarding hours of labor was difficult to secure, for the working day varies not only from industry to industry, but from shop to shop, and between departments of the same shop. The sources of information upon which this investigation has drawn to show the general situation in Springfield were: the industrial study made by the Springfield Commercial Association in 1914; the trade unions; inspections of factories, stores, and laundries made in this survey, and information obtained from workers in their homes.

HOURS IN MANUFACTURING ESTABLISHMENTS

For wage-earners in the Springfield manufacturing establishments fairly complete information regarding hours of labor was available. From data gathered by the Springfield Commercial Association early in 1914 covering 72 manufacturing establishments employing 3,981 workers, the number including a very large percentage of all such establishments in the city, certain significant classifications were made and proportions worked out. These are presented in Tables 6 and 7.

The first fact to be noted in these tables is that the great majority of the workers in all establishments—85 per cent—were working nine hours or more per day. Only 13 per cent worked eight hours or less. It appears, therefore, that in manufacturing at least the eight-hour day toward which the leaders of the labor movement throughout the country are working was still a good way from being achieved in Springfield.

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TABLE 6.—DAILY HOURS OF WORK AND NUMBER OF EMPLOYES IN ORGANIZED AND UNORGANIZED ESTABLISHMENTS.
SPRINGFIELD, 1914

Daily hours of work	Employees in manufacturing establishments					
	Organized		Unorganized		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
10	61	13	1,307	37	1,368	34
9½	30	6	22	1	52	1
9	98	21	1,883	54	1,981	50
8½	29	6	46	1	75	2
8	252	54	73	2	325	8
7	..	..	180	5	180	5
Total	470	100	3,511	100	3,981	100

TABLE 7.—DAILY HOURS OF WORK IN ORGANIZED AND UNORGANIZED MANUFACTURING ESTABLISHMENTS.
SPRINGFIELD, 1914

Daily hours of work	Manufacturing establishments					
	Organized		Unorganized		Total	
	Number	Per cent	Number	Per cent	Number	Per cent
10	2	7	19	43	21	29
9½	1	4	1	2	2	3
9	3	11	12	27	15	21
8½	2	7	2	5	4	5
8	20	71	8	18	28	39
7	..	..	2	5	2	3
Total	28	100	44	100	72	100

On the other hand the tables show shorter hours as the rule in union shops. Among employees in these shops, for example, 54 per cent had an eight-hour day, while in the unorganized establishments only 7 per cent worked eight hours or less. Only 13 per cent of the men in the union shops, moreover, worked ten hours as compared with 37 per cent in the non-union work places. These figures tend strongly to support the trade unionists' point that organized workers are able to gain, and do gain, for themselves advantages which workers acting individually do not enjoy; and they refute the claim of many employers who oppose

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organization of their workers that they voluntarily grant all of the benefits which employes might secure through the union.

MINE, BUILDING, RAILWAY, AND OTHER WORKERS

We have seen in Table 6 that the majority of the organized workers in manufacturing establishments had gained the eight-hour day. This was probably true also of all union workers in the city, as is suggested by the list which follows, in which the number of union groups working the eight-hour day is seen to be large. Some of the eight-hour groups, such as miners, represent very large numbers of workers.

SCALE OF DAILY HOURS OF WORK OF SPRINGFIELD LABOR UNIONS

Eight hours	Nine hours	Ten hours or longer
Miners (about 2,500 workers)	Brick makers	Ice men and drivers
Bricklayers, masons, hodcarriers	Machinists	Meat cutters and butchers
Painters, decorators, paper-hangers	Die and tool makers	Barbers
Plumbers	Boiler makers	Bartenders
Carpenters	Car workers	Brewery drivers
Structural iron workers	Cement workers	Railway employes
Electrical workers	Iron moulders	
Steam and operating engineers	Horseshoers	
Blacksmiths and helpers	Brewery workers	
Sheet metal workers	Team drivers	
Stationary firemen	Tailors	
Stone cutters	Bakers and confectioners	
Printers, pressmen, typesetters, bookbinders, etc.	Retail clerks	
Cigar makers	Laundry workers	

The long list of trades in the eight-hour column indicates something of what labor organizations have been able to accomplish in reducing hours; for in the not distant past all of these groups were working nine hours per day or more. Moreover, even in the case of some trades shown in the ten-hour column, the union had reduced hours. The brewery drivers, for instance, whose ten-hour day still seems long, can look back to the time when they

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were required to complete their rounds regardless of time. Likewise ice drivers at the time of the survey were required to work from six to twelve hours per day, depending on the weather, whereas formerly their hours extended from daylight even into the night. However, until more of the occupation groups in the ten-hour column are moved into the shorter day classes, the Springfield situation must be considered unsatisfactory.

The strongest labor union group in Springfield undoubtedly is the miners, who have 10 local unions with a total membership of about 2,500. The mines of the vicinity are run on a strictly closed shop basis, and since 1898, when the unions won a great victory in this industry, the eight-hour day has prevailed.

Most of the other trades represented in the table, however, were not 100 per cent organized; and while the hours given are those of members of the union, other workers in the trade were working longer hours. This was true, for example, of many boiler makers, machinists, iron moulders, and carpenters. The trade of the boiler maker is by no means a pleasant one. The work is attended by deafening noise and the workers are called upon to perform many straining acrobatic feats with pneumatic hammers and red-hot rivets down in the bowels of monster boilers. One instance was found, moreover, of a boiler maker who in one week worked practically double time. Upon occasions he had worked from Saturday morning through to Sunday night—thirty-six hours in a stretch—with merely time off for his meals. In another case excessive overtime seriously threatened the worker's health. "Working so long nearly kills him," his wife exclaimed, "I won't let him do it any more even if he does make extra money." This man had frequently been injured about the face and eyes by bits of flying steel and had had several severe electric shocks. In view of the fact that accidents have been found to occur in larger numbers when hours are long, there is special reason for shorter hours in these occupations involving large physical hazards.

Employment on the railroad offers an illustration of a combination of long hours with work requiring strained attention, and with fatal results waiting as a penalty for relaxed watchfulness.

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Practically all of the 1,000 men connected with the various railroads running into Springfield were working a ten-hour day or night as the case might be. Irregular hours and the unbroken periods of work for week after week and month after month, without a regular day of rest, are other arduous features of railway employment. One man, for instance, a railroad employe for the last nineteen years, a switchman at the time interviewed, was working from 7 p. m. until 6, 7, or 8 o'clock and sometimes even later the following morning. When going to work he never knew whether he would be on duty ten, twelve, or fourteen hours. *Seven-day labor, moreover, is the rule in the railroad business.*

In the hours of labor of railway employes the public has a special concern. Railways are public conveyances and if hours are so long as to cause undue fatigue among the workers, serious mishaps involving not only the workers but the travelling public may result. On this account most of the states, and the United States, have passed laws requiring for railway workers a period of rest, usually eight hours, after a long stretch of work. *Illinois, however, even when hours of labor are directly a matter of public concern, has never seriously endeavored to regulate the workday of men not in the public employ.*

Conditions on the street railway were similar to those on the steam railroads, though the nine-hour day was more common and hours more regular. The conductors and motormen were working in two shifts, one from 6 a. m. to 3 p. m., the other from 3 p. m. until midnight. Because the runs were short, men were not often delayed much beyond the regular schedule. Hours thus ran from nine to ten per day, without any time off for meals, which had to be eaten as best they could while on duty. *Employment, moreover, was on a seven-day week basis*, although it was possible for men to get a day off now and then, with loss of pay. Even the stokers in the power house, where the work is so hot that they must work in two-hour shifts, *were regularly reporting for work seven days a week.*

Other instances of seven-day labor were found scattered throughout the city. Messenger boys were working seven days, and the same held true for bootblacks, whose hours were excessively long and who were working under something akin to

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the padrone system, the boys being boarded and housed together by their employers. At one stand the hours of the boys, who ranged in age from seventeen to twenty-one, were from 6:30 a. m. to 9 p. m. on weekdays—a period of $14\frac{1}{2}$ hours—and from 6:30 a. m. to 11 p. m. on Saturdays— $16\frac{1}{2}$ hours! In addition to this they worked two hours on Sundays, *making a work-week of seven days and over ninety hours.**

Another example of excessive hours was that of a boy of eighteen who worked for a Springfield transfer company seven days a week from 3 or 3:30 in the morning to 6 at night, with only two hours off for meals. His hours were thus from twelve and a half to thirteen a day and from eighty-seven and a half to ninety-one a week. *Seven-day labor, however, was not confined to male workers but was found also among women and to some extent among children.* A number of boys working in drug stores and about soda fountains, as we have already seen, were employed seven days a week.

Neither of the telephone companies, moreover, had seen fit to arrange its schedule so that every employe could receive one day off each week. Girl operators for both concerns were required to work at least every other Sunday and so received only one day off in every fourteen. Restaurant workers were in many instances also subjected to the seven-day week. One woman, very soon after a serious surgical operation, was found working regularly twelve hours a day as dish washer. The room was hot and she was required to stand at work and from time to time to lift trays weighing from 50 to 75 pounds. Later she was transferred to potato peeling, at which she worked from 6:30 a. m. till 8 p. m. for seven days a week. An hour was allowed for lunch and supper and she had free time from 2 to 5 p. m., but this she seldom took because she felt that she was slow.

Certain tasks under our complex city life need to be performed for seven days a week, and there seem to be reasons which justify Sunday work in some instances; but there are few occupations in which it is not possible for an employer to adjust his force of workers so that each employe may enjoy at least one day of rest

* For a fuller discussion of the child labor situation in Springfield see chapter on Child Labor beginning on page 54.

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in seven, whether it be Sunday or some other day. This should be reasonably simple to accomplish in the case of railroad, street railway, and telephone employes. In New York state factories and mercantile establishments are required by a law which has been upheld by the courts to give employes one day of rest in seven; similar legislation should be only a question of time,—and a *short* time,—especially in the other great manufacturing states of which Illinois is one.

HOURS OF WOMEN WORKERS

It was clear from our investigations that a much larger proportion of male than female workers in Springfield were enjoying an eight-hour day. The carpenters, painters, bricklayers and other building trade workers, the miners, the printers, the cigar makers and many other male workers through the strength of their unions had been able to make this gain. But their wives and sisters and daughters, whose physical resistance to the strain of industrial occupations is less than theirs, and who besides generally have home tasks after their exhausting day outside, for the most part were working in Springfield factories, stores, and laundries from nine to ten hours per day.

One reason for this undoubtedly was the fact that women workers were almost entirely unorganized. A few of them were members of a weak laundry workers' union and a few profited by the strength of the men's unions in the printing and cigar-making trades; but aside from these instances unionism had been very little utilized for them.

The women had, on the other hand, gained some protection from long hours of work through legislation, although much less than has been afforded women workers in many other states. Since 1909 in Illinois their hours have been limited to ten per day if employed "in any mechanical or mercantile establishment, factory, laundry, hotel, restaurant, telegraph or telephone establishment or offices thereof, or in any place of amusement, or by any person, firm or corporation engaged in any express, transportation or public utility business, or by any common carrier, or in any public institution." About the only occupations not covered are domestic service and farm and office work. *Al-*

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though the law fixes the daily limit at ten hours, no limit is placed upon the hours per week, which may run up even to seventy.

This law, which sets a standard much too low, seemed for the most part to be observed throughout the city—which observance in view of the day legally allowed, employers could hardly in reason have failed in. More than a majority of the women workers engaged in manufacturing in Springfield were employed in three factories: the watch, meter, and shoe factories. The first two, at the time of this investigation were operated on a nine-hour and on a six-day basis, with Saturday afternoons off the year round and two weeks of vacation without pay. Women workers in these factories were all provided with comfortable seats having backs and were seated at their work. On the whole, working conditions in these establishments were excellent and the tasks to which women were assigned—sorting and assembling, drilling, grinding (in oil), etc.—did not require much physical exertion. In fact, the strain of the work comes rather from concentration of attention and physical inactivity. The pay was by the piece, which tended somewhat to speeding. At the time of our visits these factories, like many others throughout the country, were operating at less than capacity, due to general industrial depression. More recently this situation has improved slightly. Formerly a ten-hour schedule had been observed, but in order to diminish output without laying off more workers than necessary the management had reduced hours to nine per day. The result in one establishment was a surprise to the management; instead of a reduction of 10 per cent in output as was expected there was a reduction of but 3 per cent in output.* This was interpreted as showing that fatigue at the end of a ten-hour working day had had a marked effect upon the efficiency of the workers.

At the shoe factory a six-day schedule of ten hours per day was being followed and working conditions were less satisfactory. About 400 women and girls were employed. The largest group, machine stitchers, were seated at their work but were crowded together under somewhat trying conditions as to light. Pay was

* For evidence as to increased output following reduction of hours of work, see *The Case for the Shorter Work Day*, Brief for Defendant in Error, Bunting vs. Oregon, Supreme Court of the United States. Reprinted by the National Consumers' League, New York. Pp. 621-819.

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by the piece and by working at top speed stitchers could earn \$1.50 a day. Other girls stood ten hours a day at machines cutting leather and still others stood gluing leather to be pasted on as tips. The ten hours of standing must have a hurtful effect. On Saturdays the factory closing gong did not ring until 5 p. m. and thus the women and girls filed out after a week of fifty-nine hours of work.* There was no plan for regular vacations, with or without pay.

Women workers in the laundries, except on Saturdays, when they left in the afternoon as soon as the clothes on hand were finished, were also required to work the full quota of ten hours per day allowed by the law. The conditions under which these hours were worked were often fatiguing. The majority of the women stand at their work, though experience elsewhere has shown that some of the tasks performed in Springfield in a standing position could be done quite satisfactorily sitting. Heat and steam also necessarily attend certain processes although the two Springfield laundries visited had made considerable efforts to minimize these features.

In the stores of Springfield where women were employed the ten-hour limit was reached on only one day of the week. A nine-hour day prevailed on the first five days of the week, when the periods were from 8 a. m. to 6 p. m. with an hour off at noon. On Saturdays, however, all the stores were kept open until 9 o'clock in the evening and in order that all saleswomen might be behind the counter in the evening without exceeding the legal ten-hour limit the schedule was changed so that some should not come on duty till 9 a. m. or later, while others were given an hour and a half for each meal. In a large grocery store a substitute worker was supplied while each cashier was off for three hours during the day. During the course of our investigations no violation of the women's ten-hour law was found in any Springfield mercantile establishment—but so long a day would itself, in certain other states, have constituted a violation. One five-and-ten-cent store was giving all girls who had been employed a year or more a

* During May and June, 1914, this factory did not operate Saturdays due to depressed business conditions. This condition, however, was known to be exceptional.

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week's vacation on pay. A department store was also giving such employees a week's vacation on pay.

We have already seen that women and girl telephone operators in Springfield were working seven days a week every other week—six days in the alternate weeks. Night work was also required of a limited number of operators. A young girl of sixteen, for example, was employed by one company on the night shift from 9:30 p. m. to 7 the next morning; but her mother worried so much about her being away at night that she finally had to give it up. Hours of work did not exceed nine per day and in some cases they were seven, while a rest period of fifteen minutes was allowed in the middle of the morning and in the afternoon, instituted through the employers' appreciation of the strain resulting from the close attention required of operators on duty at their boards. It must be said, however, that a nine-hour day for women in the telephone industry, night labor for women, and only one day of rest in fourteen are intolerable. The fifteen minutes of rest does not help a great deal.

Besides the telephone operators who worked at night, a few women were engaged in night work in restaurants and hotels. Unlike the law of New York state already held by the courts to be a proper measure for the protection of the health and morals of women, *the Illinois law permits women or girls over sixteen years of age to be employed during any hours of the night*. From the facts gathered in Springfield it can be safely assumed that a large number of women and girls are employed regularly as night workers in other parts of the state—particularly in Chicago.

Thus in the industrial protection now being given women Illinois is far from being abreast of the times. In failing to place greater restrictions upon the hours of women workers, it not only lags behind the more progressive states but also behind the other great manufacturing states of Massachusetts, Pennsylvania, and New York. Each of these states employs a larger number of women in industry than Illinois; but Illinois comes fourth in the list, and indeed in the total number of male and female workers it ranks third, being exceeded by only Pennsylvania and New York. Yet each one of these states gives women workers greater protection than does the state of Illinois. New York

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limits their hours to nine, Massachusetts and Pennsylvania to ten per day, with the additional proviso in all three states that weekly hours shall be *restricted to fifty-four per week, as contrasted with the seventy which women may work in the state of Illinois*. When compared with still other states, Illinois appears in even a less favorable light; for California, Arizona, Washington, Wyoming, the District of Columbia, and Colorado limit the hours of women workers to eight per day.

CONCLUSION

Springfield conditions regarding hours of labor showed considerable variety. A restaurant worker here, a teamster or a boiler maker there, and the more or less exploited Greek bootblacks, were kept on duty for extremely long hours; but no large factory, store, mill, or laundry regularly required more than ten hours of work a day. Many of them require only nine. The majority of the trade unionists of the city, moreover, work only eight hours.

At the same time hours of labor considered as a whole were not what should be reasonably expected. The eight-hour day toward which the leaders of the labor movement throughout the country are working was still a good way from being achieved in Springfield. The great majority of all workers, both men and women, were laboring nine or ten hours a day or more.

There was in the city, moreover, a considerable group of people who could not claim the right, so long recognized as necessary to good health and citizenship, of one day of rest in seven.

There were a number of women and girls under twenty-one years of age still engaged in night work.

Finally, many children were working for more than eight hours a day in spite of the law which makes such labor illegal.

For reduction in hours of work of men, except on public work and in special occupations, such as railroading, legislation does not at present promise much. It would seem, therefore, that until needed legislation comes reductions in men's hours must be brought about through the action of either the employers or the employees. To some extent, doubtless, reductions may be looked for from employers who see in their industries an avenue for social service; but the best hope, judging from past accomplish-

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ments, appears to be offered in labor organization under intelligent and conscientious leadership.

For the reduction of the hours of women workers the unions offer less encouragement, not because women's unions might not be effective if strongly organized, but because it is exceedingly difficult for the labor union movement to make headway among women workers. On the other hand the right of the state to regulate the hours of work of women is firmly established; and Illinois should take her place with the other states which offer greater industrial protection to women. The reduction of the workday for women to eight hours, the limitation of the weekly hours, the elimination of night work for women and the guarantee of one day of rest in seven, should be made a part of the state law.

For reduction in the hours of child workers, as already shown, better law enforcement is needed.

In addition to these measures, action by consumers through public protest and the withdrawal of patronage where hours of work are harmful, should also be effective. Also some of the more indirect methods, outlined in the preceding chapter for dealing with low wages, apply in greater or less degree to hours of work that are too long.

VI

ONE HUNDRED WAGE-EARNERS' FAMILIES

The main features of the industrial and work situation in Springfield—physical hazards, factory inspection, workmen's compensation, child labor, wages and irregularity of work, employment agencies, hours of work, labor legislation, and related matters—have now been reviewed. In planning the survey it was felt, however, that the investigations should be carried further—that as far as possible the effect of industrial conditions, particularly wages and unemployment, upon family life should be learned; for results in that connection are important not alone from the standpoint of the individual, but also of the community. A study of conditions in 100 wage-earners' families was therefore made. These families included 573 persons, 272 of whom were employed in gainful occupations.

There is no claim that the 100 families selected are absolutely representative of Springfield's working population, for there is no known method by which 100 entirely representative families might be selected. The intention, however, was to make them as nearly representative as possible, and care was used to that end. Some were the families of thirteen-year-old school children who had supplied information for the vocational inquiry in the school section of the survey. Others were families of children who had received work certificates during the previous two years. Still others were chosen from the city directory or were chanced upon by the investigator while following other lines of inquiry. Since people are very likely to live near their work, families were selected from different parts of the city in order to get as wide a representation of industries as possible.

In nationality the groups selected were fairly typical. Four-fifths of Springfield's residents according to the 1910 census are native-born white Americans, while of the heads of the families

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in this investigation a small per cent above three-fourths were native-born white Americans. Again, a little over 5 per cent of Springfield's population is colored; five of the 100 families happened also to be colored families. Of the foreign-born heads of families investigated 12 came from the British Isles, two from Germany, and one each from Hungary, Syria, Lithuania and Switzerland. Among these foreign born only six had been in this country less than ten years, so that the families visited, if not by birth at least by length of residence, were largely American. American standards of living, therefore, were those studied.

In occupations the group selected was also fairly typical, except perhaps for too large a percentage of coal miners. In the 100 family groups, 25 of the heads of families were coal miners, 11 were common laborers, 10 railway men, six building trade workers, while the other half of the hundred were factory employes, street railway men, cigar makers, drivers, and employes in miscellaneous occupations. Four of the men were in business for themselves in a small way.

The average size of the families turned out to be a little larger than the probable average for the city. In 1910 the census reported 11,905 families and 51,678 people in Springfield, or 4.3 persons to each family. The population, however, includes many single persons separated from their families. The average number of members in the families visited was 5.7 persons.

The time at our disposal did not permit an extensive inquiry into family budgets. The aim was rather to collect information on particular points which would otherwise indicate something as to standard of living.

PROPORTIONS GAINFULLY EMPLOYED

The first fact which stands out in reviewing the results is the large proportion of persons over fourteen years of age who were gainfully employed. Of the males sixteen years of age and over, 152 out of 159, or 96 per cent, were in gainful occupations; and of the females of sixteen years and over, 73 out of 162, or 45 per cent, were so employed. Still more surprising, 41 of the 57 children between fourteen and sixteen years of age, or 72 per cent, were gainfully employed; and out of a total of 378 members of

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these 100 families who were fourteen years of age or over, 266 or 70 per cent contributed to the family income. The figures and proportions are brought together in Table 8.

TABLE 8.—PERSONS GAINFULLY EMPLOYED AMONG THE MEMBERS OF 100 SPRINGFIELD WAGE-EARNERS' FAMILIES, BY AGE AND SEX

Age and sex	All members	Members gainfully employed	
		Number	As a per cent of all members
Males sixteen years of age and over	159	152	96
Females sixteen years of age and over	162	73	45
Children fourteen to sixteen years of age	57	41	72
Children under fourteen years of age	195	6	3
Total	573	272	47

With such a large percentage of persons gainfully employed in these families, there were necessarily many families having more than one wage-earner. In fact there were only 19 cases where the families in each instance lived on the earnings of one person. Thirty families had two breadwinners, 27 had three, 15 had four, and 9 had five or more. *Thus in more than half the 100 families there were three or more contributors to the family support.* In many of these cases, of course, the earnings were small. Several children under fourteen years of age, for example, made regular contributions by earning a dollar or two a week selling papers or running errands. With but few exceptions, save in the case of mothers who cared for the homes and of small children, all who were able helped in some financial way in maintaining the home; and in some cases mothers were forced by economic pressure to earn substantial amounts either by taking in boarders or lodgers, or by going outside the home to work.

WAGES

Weekly wages of the members of these families engaged in gainful occupations are shown in Table 9. For 37 out of the 272

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earnings could not be presented because some of them did not report their wages, others had businesses of their own and kept no accurate weekly account, and still others kept lodgers or boarders or received maintenance in addition to wages, which was difficult to estimate.

TABLE 9.—WEEKLY WAGE RATES OF 235 MEMBERS CONTRIBUTING TO FAMILY INCOME IN 100 SPRINGFIELD WAGE-EARNERS' FAMILIES

Weekly wage rates	Males		Females sixteen years of age and over	Children under sixteen years of age	Total
	Fathers of families	Other males sixteen years of age and over			
Less than \$3.00	1	9	5	29	44
\$5.00 and less than \$6.00	..	3	11	8	22
\$6.00 and less than \$7.00	..	9	10	3	22
\$7.00 and less than \$8.00	..	3	13	3	19
\$8.00 and less than \$10	5	8	9	..	22
\$10 and less than \$12	4	7	5	2	18
\$12 and less than \$15	11	11	2	..	24
\$15 and less than \$20	21	7	1	..	29
\$20 or more	28	7	..	..	35
Total	70	64	56	45	235

Of the fathers of families only 10, one-seventh of those whose earnings were reported, received less than \$12 a week or \$2.00 a day, indicating that in wage rates the great majority of the families chosen for study were not among the poorest of the poor. Indeed, 28 fathers earned \$20 a week or more. The other male workers, because of greater youth and perhaps inexperience, did not fare so well. One-third of the other male workers sixteen years of age and over earned less than \$7.00 a week, one-half less than \$10.

Of the women and girls sixteen years of age and over more than one-fourth, 16 out of 56, earned less than \$6.00 per week; 39 of them, or 70 per cent, earned less than \$8.00.

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UNEMPLOYMENT

Wage rates, however, as already pointed out, tell but half the story. The other half relates to regularity of employment, and in this respect the wage-earners in these 100 families were not particularly fortunate. At the time the families were visited, a time of unusual unemployment due to financial depression, 58 of the 272 persons who contributed to family support had had no work during the previous week. While this condition was doubtless abnormal, the amount of unemployment which usually existed was nevertheless serious. *Exactly half of the 80 fathers who were gainfully employed had had irregular work during the past year*, and by this was meant the loss of employment for much more than a few days. The work of men and women in a factory which closed three weeks in the summer and about two weeks at Christmas time, for instance, was reported as "regular." *Of all members contributing financial support in these families, two out of every five reported irregular employment.* Table 10 shows in detail the facts regarding irregularity of employment among the 272 wage-earners.

TABLE 10.—IRREGULARITY OF EMPLOYMENT AMONG 272 BREAD-WINNERS IN THE FAMILIES OF 100 SPRINGFIELD WAGE-EARNERS

Age and sex	All bread-winners	Breadwinners reporting irregular employment	
		Number	As a per cent of all bread-winners
Males sixteen years and over	152	71	47
Females sixteen years and over	73	17	23
Children under sixteen years	47	23	49
Total	272	111	41

One really needs to go into the homes of these workers to understand what this extensive irregularity of employment means. In one family visited the father, a miner, had not had a day of

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work for two months and the mother had been forced to take in washing and go out cleaning to provide the necessities of life. In another the husband, a skilled machinist and a member of the machinists' union, had been idle for several months and was willing to do common labor at \$2.00 a day to provide for his family. In another case the son, a boilermaker, whose earnings were an important part of the family income, had been idle five full months in the previous year. In still another, the father, a miner, had been employed only half the time in the previous year and only seven days in the previous two months. One father, the sole support of a family, had been idle for six months while recovering from a factory accident, and his family had endeavored to subsist upon half his regular pay. The daughter in another family, a milliner, was idle more days than she worked. In the 100 families only one-fourth reported regular employment for all persons contributing to the family income during the previous year.

In a number of families among the 100, incomes were supplemented in various ways. In one case a father received \$10 a month pension as a Civil War veteran. In another the father had managed to secure appointment as delegate to a labor union convention and stated to the survey investigator that he had cleared \$200 from the amount allowed for expenses—incidentally a questionable charge upon the union's funds. A few families owned property from which they received rentals. Thirteen took in lodgers who often were boarders also. Some saved the cost of fuel by sending small boys to gather coal along the railroad tracks. Many reduced food expenses by raising vegetables and keeping chickens on small plots surrounding their houses. The main source of income in all the families, however, was wages, and these in many instances were greatly reduced by unemployment.

None of the families or individuals among them had kept account of their wages or the exact number of days employed for any definite period; and hence it was not possible to judge the adequacy or inadequacy of income by comparisons with family budget needs. Some light upon the question was obtained, however, by carrying the study of the 100 families into several phases of home conditions.

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THE WORKER'S HOUSE

If our inquiry brought out any one fact clearly it was that the housing problem is to a very great extent economic—a problem of family income. A few families occupied comfortable two-story houses with plenty of room and all modern improvements. At the other extreme a few occupied small dilapidated houses with but few comforts. Almost without exception there was a direct relation between family income and the kind of house occupied; wherever income permitted the family moved to better quarters. Thus a family with 13 members and several wage-earners paid \$21 a month for a thoroughly up-to-date house of eight rooms. Another family of nine paid \$20 a month for a very comfortable home. In contrast, a man of small income with a wife and two children paid \$5.00 a month for three rooms in a dilapidated house which was also occupied by a widow and five children.

Of 57 families supplying information regarding rent, 19, or exactly one-third, paid less than \$10 a month; 31, or more than half, paid less than \$12. Only nine paid as much as \$16 or more. In all but four cases—in which cases apartments were occupied—families had the advantage of a yard with grass and often a small garden. Some yard space is typical of Springfield, where the single family house prevails, as is indicated by the fact that in 1910 the census enumerators counted 11,905 families and almost as many (11,214) dwellings.

Most of the houses of the families studied, however, were four- or five-room frame structures without gas, electricity, city water or inside toilets. In cases where the rent was less than \$12 a month it meant that for water the home was dependent upon wells or cisterns in the back yard, where privies were also located. Rarely did the houses have gas or electricity; instead, oil lamps had to be used. These families paying less than \$12 (and it will be remembered that over half of the families reporting rents were in this class) had to do not only without modern improvements, but were forced to live in houses more or less out of repair or under conditions that subjected them to overcrowding. Judging from the houses seen in this inquiry it was fairly clear that a family of five or six persons would need to pay from \$10 to \$12

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per month for a reasonably satisfactory dwelling in Springfield, with the probabilities in favor of the higher figure.*

Some families in order to secure better houses than they could otherwise afford; or in order to ease financial pressure, were resorting to the expedient of taking in lodgers some of whom were also boarders. Thirteen of the 100 families investigated did this.

It was not uncommon, moreover, to find married sons and daughters together with their children and their parents living in one family group in order to share rents of \$10, \$12, or \$14 a month. In the case either of outsiders being lodged or of relatives living together overcrowding was nearly always the result. One family with seven members of its own, for instance, and living in three rooms took in lodgers. Two families of six, each with three rooms, did likewise. A family of 12, already crowded into seven rooms—two brothers with their wives and four children occupying four of them—felt the need of earning money by keeping a lodger. Thirteen per cent of the families studied had to resort to this infringement upon home privacy and to suffer the congestion entailed, as a partial result, at least, of the low wage and unemployment situation.

CHILD LABOR AND COMPULSORY EDUCATION

In much the same way child labor and compulsory education problems are closely related to family income. In the year ending April 30, 1914, as already pointed out, 138 Springfield children between fourteen and sixteen years of age secured age and school certificates, thus terminating their schooling and entering industrial life. In 1913 the Springfield school authorities collected data from parents on the reasons why children left school. More than half stated that the children's earnings were "absolutely needed for the support of the family." While it is probable that this proportion should be discounted to some degree on account of the fact that many children, boys particu-

* This conclusion is borne out by the facts on rents gathered in the charities section of the survey. From information brought together there it was believed fair to conclude that a family requiring three or four rooms would need \$8.00 per month as a minimum for rent. Five or six rooms would cost more. See companion report, McLean, Francis H.: *The Charities of Springfield, Illinois*, pp. 96-97. (The Springfield Survey.)

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larly, drop out as soon as possible because the school work as at present conducted is nowhere nearly as interesting to them as the work of the world, nevertheless the numbers leaving school because of the family's pressing need of income are large. In our investigation of the 100 families, out of the 56 persons who left school before sixteen years of age, 25 had done so because their parents did not consider themselves financially able to continue them at school. It was frequently stated that a child had been taken out in spite of his own desire to continue and with deep regrets on the part of the family.

In the family of a driver earning \$12 a week it was stated that of the nine children the older ones had been obliged to work as soon as each had reached fourteen—in some cases even earlier—or had had to stay at home to help the mother in the care of the others. It was only after a number of the children were adding to the total income that the family could give a younger child the opportunity to continue in school. The same condition existed in another family where only the youngest of six children had been able to stay in school until he had finished the grammar grades. Even with the father and three of the older children at work and helping toward the family support it was not felt that they could let this boy go to high school or to business college, although he was very studious. In a miner's family the youngest of three children was still in school although he was sixteen years old, but he earned a little money selling papers. Another son, nineteen years old at the time of our interview, had gone to high school for two years, but the family could not afford to let him continue. The mother later regretted that she had not made greater efforts to keep him in school, feeling that with even stricter economy than they had practised the family could have managed it. Thus in wage-earners' families, especially during periods of stress, there is an ever-present temptation to take children out of school as soon as the law permits in order that their earnings may help lessen the financial problems of the family.

Not all parents, however, choose the easier path; some make great sacrifices for the education of their children. One colored family visited furnished a striking instance. Two girls, fifteen and sixteen years of age, were being continued in school although

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the father was a day laborer and the mother had to work out by the day to supplement his earnings. The mother was anxious that her children should be educated and was more than willing to assume her part of the burden. In another family, where the father's earnings were irregular and uncertain and the mother took in dressmaking, one son had been forced to leave school after graduation from the grammar grades. He often complained of this fact but was trying to get ahead by attending night school. A younger son of fourteen years was being kept in school by the mother, who sewed late into the night, leaving her housework and washing as a Sunday task. Of course, these cases are exceptional. Usually when incomes are inadequate children drop out of school. Not all parents are willing to keep on making sacrifices when their children can legally go to work, and some mothers even though they would gladly do so have no dressmaking or other ability by which to earn, or else have their hands full at home caring for younger children. From the facts at hand it is safe to say that wage and unemployment problems are closely tied up with problems of child labor and compulsory education, and that at least 100 children leave the Springfield schools every year before sixteen years of age, many of them from the fifth, fourth, and third grades, because their parents feel that they cannot afford to give them further schooling.

If children always went out from school into occupations which taught them trades, the effects of their leaving school with so limited an education might not be serious, but in most instances such is not the case. The positions into which children under sixteen years of age drift are to a great extent "blind alley" jobs. It has already been shown that of the 57 children between fourteen and sixteen years of age in the families under consideration 41 were gainfully employed. Of these 41 only 13 were in work where they were learning a trade. These were apprentices in printing establishments or cigar factories, or helpers in mechanical jobs. The other children—68 per cent of all at work—were in employments little likely to furnish them with work they could afford to stay at for more than a very few years. They were mostly errand boys, messenger and wagon boys, soda fountain clerks, ticket takers in theaters, bell boys in hotels, or pin boys

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in bowling alleys. The economic pressure which drives children to take up work at an early age is particularly to be deplored because of their tendency to drift into "blind alley" jobs.

HOME CARE OF CHILDREN

In the delinquency and corrections section of the survey it is pointed out that juvenile delinquency is often the result of unfavorable home conditions, such as deny children the parental supervision which should be every child's birthright.* As a result, many children who might otherwise grow up to be law-abiding citizens run the streets, join in neighborhood depredations, are haled into court as delinquent children, and sometimes end up as "confirmed" criminals. There is little or no question in the minds of those who have inquired into the reasons for neglected childhood that the economic factor is often important. In many cases it forces the mother, the natural guardian of the home, to give a large part of her time to efforts to add to the family income. "The number of women applicants," said the superintendent of the Springfield Free Employment office, "is a sure index to the amount of unemployment among the men." And the office had a good many such applicants.

In the 100 families which form the basis for this study 95 of the mothers were living and at home. Twenty-six of the 95 were earning money to contribute to the support of the family. In eight cases the father was dead and the mother had been forced to become a wage-earner for that reason. In three cases the father was living but not contributing to the support of his family. In the other 15 cases, that is, in 16 per cent of all the cases where the mothers were living and at home, the father was a wage-earner but the mother nevertheless found it desirable to supplement his earnings rather than permit the family to drift to a lower standard of living.

A number of these 26 wage-earning mothers made their contributions to the family income by work in the home. One woman rented a seven-room house and in addition to her family took care of 12 lodgers—railroad men—who paid \$2.50 a

* Potter, Zenas L.: The Correctional System of Springfield, Illinois, pp. 112-121. (The Springfield Survey.)

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month per man for sleeping space. An Italian woman supplemented the irregular earnings of her husband, a miner, by keeping a lodger and doing his washing. Others also did washing in their homes and one mother, as stated, dressmaking. Some, however, worked out cleaning or washing at \$1.50 a day. Three found employment in laundries, two were helpers in restaurants.

The majority of these wage-earning mothers did not have small children at home, so that bad results in neglected childhood were not present; but this was not always the case. For example, one woman was struggling to support herself and five children, ranging in age from four to twelve years, upon \$5.00 a week which she was able to earn in a laundry, and \$8.00 a month which she received under the widowed mothers' pension act. Her husband, a miner, had been killed four years before; at his death the family was destitute as the result of a six months' strike. The widow was helped by the labor union and her church, and the case was referred to the Associated Charities. When relatives were appealed to they suggested that she try to get washing to do so that she could support herself. She received charitable help from time to time, aside from her pension, but had to rely mainly upon her own efforts. This meant neglect of her children, however, and the two smallest, four and five years old, were left without any one to look after them while the mother was at work and while the older children were at school.

Another woman had been left a widow three years before. She had five small children all under fourteen years of age. Until two years before the father's death he was steadily employed as fireman in a woolen mill. When the mill moved from Springfield, however, he was able to get casual work only. Gradually the family consumed its small savings until finally payments on life insurance were discontinued, and, therefore, at the father's death the family was altogether penniless. A widowed mothers' pension of \$10 per month was granted by the county; the oldest boy as soon as he reached fourteen was sent to work; and the mother took in washing. When visited this family of six was living in a ramshackle three-room house for which they paid \$5.00 a month.

In a number of cases where mothers were not wage-earners

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at the time of our investigation, they stated that they had been so employed until children grew old enough to help in the support of the family. One father, a skilled slater from Germany, had been unable to get work at his trade and was forced to take up other occupations, first as a miner, then as a laborer in a lumber yard at \$1.50 a day. His earnings were too small for the support of a large family and his wife used to go out to cook in private families. It was only when the children began to earn that she devoted her whole time again to her own home. Thus her time at home was reduced at the very period when most needed. In another case a mother did washing for twenty-six years to increase the family income until all the children were old enough to go to work. The father was a laborer earning \$1.75 to \$2.00 a day. Not only was his work unsteady, but twice he was injured while at work, first in a machine shop, later on a railroad. As the years passed the mother became crippled by her hard work, and as soon as the law permitted the children were forced to leave school. Not till then could she give up washing, and in the meantime the home suffered.

SAVINGS

That there were families absolutely unable to save from the father's earnings except at the expense of health and decent living was claimed by many of the persons interviewed, and the size of some of the wages bore out the claim. The results that are almost sure to follow such a situation are well illustrated in the cases of the two widows already cited, each of whom was struggling to care for five small children. On the other hand, the thrift and foresightedness of many workmen's families under the circumstances were surprising. One of the favorite means for saving in a city like Springfield, where the price of a house and lot is not prohibitive, is by buying a home. Thirty-nine of the 100 families visited—almost two-fifths—were working and saving to that purpose. A few of the 39 in fact already owned their homes free from mortgages; the others were carrying mortgages or buying homes on the instalment plan. "We'll own it if we live long enough," said one man hopefully, although the progress

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did seem pretty slow. Though a number of the 39 had made only small payments, these families, nevertheless, had saved something.

To the workman who buys his home on the instalment plan—the only way open to most wage-earners—there is, however, always the danger that sickness, accident or unemployment may defeat the hope that seemed almost too good to be true. Many workmen were content to rent, year after year. Thus one miner had been paying \$12 a month rent for twenty-three years. He had often considered buying a home, but even though, as he said, his wife was “very thrifty,” he feared that he would be unable to make payments during the slack times which are so characteristic of mining in this region. In another instance a man and wife had hoped to be able to buy a home, but with the man’s earnings of only \$50 a month and four children to support, they had finally given up hope.

The buying of a home often meant extra, if not too great, economies in living costs spread over a long period of years. Sometimes it meant putting children to work as soon as the law allowed. Some of the families were sharing their homes with lodgers as a means to home owning. Others put into the payments every possible cent they could save, leaving no allowance even for insurance. In the few cases in which homes were owned free from mortgage most of them had been bought wholly or partly with savings made before marriage or before the coming of children had increased home expenses.

Outside of the two-fifths who owned or were buying their own homes a few families had invested savings in other property or had something in the bank. One miner’s thrifty wife, knowing that there would be a reduction in her husband’s income for a few months every year, always laid in a large supply of groceries and paid several months’ insurance in advance.

By far the most common method of providing for emergencies was by carrying life insurance. Five out of every six families carried such insurance, usually not only for parents but for children as well. Payments in one family amounted to as much as \$9.00 a month; several, however, devoted but \$1.00 a month to this purpose. There seemed to be a general dread in these families of the disgrace of having their dead “put away by the

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county," and it was this rather than the attempt to provide for survivors that led families to put aside small sums each week for the purpose of carrying insurance. Amounts carried were usually only enough to provide a decent burial. Men who were members of labor unions generally received death benefits from their unions, but the amounts paid were usually only enough to pay the cost of a funeral.

CHARITABLE RELIEF

In spite, however, of the fine spirit of thrift shown in these families many had been unable to provide against serious emergencies. A comparison of the list of 100 families with the records of the Associated Charities and other organized relief agencies, the alms of all of which did not represent by any means the total amount given in the city, showed that nine had been forced to seek aid from these agencies. One family at the time of our visit was receiving help from a relief agency because of the "insufficient wages of the father." The two widows with small children were receiving pensions from the county. A fourth family was being helped by the Tuberculosis Association while two others had previously been assisted by this organization. Two small children from one family were in an institution. Another family had been helped by the Associated Charities in time of unemployment, and still another when the chief breadwinner was injured. It is a significant fact that of these families of Springfield wage-earners as many as 9 per cent were living so near the margin of dependency that death, sickness, or unemployment—events which may reasonably be looked for in every worker's family—had obliged them to seek charitable relief.

SUMMARY

From a study of 100 wage-earners' families, chosen with a view to securing as representative families as possible, the following facts were learned:

Seventy per cent of the 378 persons fourteen years of age or over in these families were contributing to the family income. This meant many families with more than one wage-earner. In fact only 19 were living on the earnings of one person each.

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Practically all who were able were obliged to help in order to secure moderately good conditions of life.

The proportion of wage-earning children was very large. Of the 57 between fourteen and sixteen years old, 41 or 72 per cent were gainfully employed; and a number under fourteen brought in a few dollars now and then.

When employed, 10 out of the 70 fathers whose wage rates were reported received less than \$12 per week; 32 received from \$12 to \$20; 28 received \$20 or more; and the wages of the others were not reported or could not be estimated.

Of all the other males employed for whom information was available, one-third earned less than \$7.00 a week, one-half less than \$10. Among the women of sixteen years and over, more than one-fourth earned less than \$6.00, and almost 70 per cent less than \$8.00 per week.

Wage rates, however, are more significant in connection with regularity of employment. Of all members of these families who contributed to the family income, two out of every five reported irregular employment for the previous year—and irregular employment meant the loss of from several weeks to six months.

No accurate count of wages or days employed was kept by the workers interviewed. A few other tests were applied, however, as casting light upon the adequacy or inadequacy of earnings.

Of 57 families supplying information on rent over half lived in houses which rented for less than \$12 a month. They were mostly four- or five-room houses without city water, gas, electricity, or inside toilets. The insanitary surface well was the water supply. Some of these houses were crowded because of the necessity of taking in lodgers. Thirteen of the 100 families had either boarders or lodgers, or both. One family of seven living in three rooms took in lodgers.

Of 56 persons discovered in the investigation who had left school before sixteen years of age, 25 or nearly half had left because their parents had not felt able to continue them in school. There is reason to believe that a considerable number of Springfield children—running close to 100 per year—drop out of school because the family needs what they can earn. Most of the occupations they go into are "blind alley" jobs, which do not offer training or possibilities of advancement.

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Over one-fourth of the mothers in the 100 families were earning money to augment the family income; and in some cases this meant neglect of children. One woman had done washing for twenty-six years until all her children were of legal age to work.

Thirty-nine of the families were saving in the form of payments on a home. A few more had bank savings; and five out of every six carried insurance, the amounts usually being only enough to cover burial costs.

Nine of the 100 families had been forced to ask for either public or private charitable assistance.

Finally, conditions found in Springfield showed clearly, as they have in other investigations elsewhere, the important part which low wages and unemployment play in the problems of bad housing, child labor, evasion of the laws as to compulsory education, neglected childhood and the predisposition of families to physical and often moral breakdowns. No solution of these problems, therefore, will be effective that does not eliminate the great economic waste of unemployment and correct the evil of low wages.*

* Very valuable data leading to conclusions along similar lines to those reached in the Springfield study of wage-earners' families have been published in a recent volume by A. L. Bowley and A. R. Burnett-Hurst, entitled *Livelihood and Poverty—A Study in the Economic Condition of Working-class Households in Northampton, Warrington, Stanley and Reading, England*, made for the Ratan Tata Foundation (University of London). London, G. Bell & Sons, Ltd., 1915. To quote from p. 46:

"It is often implied that the wages of an adult workman are normally sufficient to bring up his family in decency; but out of 2,285 adult males in our composite city as to whose earnings we have definite information, 729 or 32 per cent were, at the time of our inquiry, earning less than 24 shillings a week. It is often implied that the causes which bring men into poverty are within their own control, that they are the masters of their fate and the creators of their misfortunes. In many cases this may be so; yet the extent to which it is true is exaggerated. Of households living in poverty, the cause is to be found in the death of the chief wage-earner in 14 per cent, in his illness or age in 11 per cent, in his unemployment in 2 per cent, in the irregularity of his work in 2 per cent, in the fact that his income is insufficient for his family of three children or less in 26 per cent of the cases, and in his inability to support his family of four children or more in 45 per cent (in nearly half of this last group he could not support even three). It is often implied that the children of the working classes have as good a chance as those of the well-to-do of a life of independence and health. But out of 3,287 children who appear in our tables, 879 or 27 per cent are living in families which fail to reach the low standard taken as necessary for healthy existence; and apart from these there are the very numerous children in Poor Law institutions who, though presumably adequately fed and

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INDUSTRIAL BETTERMENT IN SPRINGFIELD

FORCES FOR IMPROVEMENT

While, as we have seen, some industrial conditions in Springfield were found to be fairly satisfactory, there were many more that in important particulars failed to meet the minimum standards which the general public looks upon as reasonable. These needed improvement or correction. The immediate and important question is, what forces may be counted upon to forward this industrial betterment.

Three groups of interested parties have a share in determining industrial conditions: employers, workers, and the public. It is through these groups—employers acting together in some degree but for the most part singly, employees acting individually and through labor organizations, and the public acting through crystallized public opinion and the power of the state—that industrial improvement has been brought about in the past; and the same groups must be looked to for constructive action in the future.

Of the three, employers have at present the largest power and therefore the largest responsibility in determining industrial conditions. Except where labor unions force concessions, or

clothed, are otherwise handicapped. The figures are, we venture to think, beyond all reasonable doubt, and, as we have already explained, they take no account of sickness and temporary unemployment.

"There is the further even more serious consideration that since the main incidence of poverty is among families where there are three or more children below school age and no subsidiary earners, it follows that many other families have passed through this stage and only risen out of it when the children began to earn, and that another large number recently married will (if conditions do not alter) fall into poverty as the third or fourth child is born. The proportion of children, therefore, who during some part of the first fourteen years of their lives are in households of primary poverty, is considerably greater even than that found in an instantaneous survey. Facts such as these require no comment."

See also Hibbs, Henry H., Jr.: *Infant Mortality: Its Relation to Social and Industrial Conditions*, pp. 103-127, reprinted by Department of Child Helping, Russell Sage Foundation, New York, 1916.

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where laws laying down definite requirements are enforced, employers have large latitude in fixing wage rates, methods of payment, hours of labor, conditions as to safety and sanitation, and regularity of employment. They may choose whom they will employ, and in a large proportion of cases may discharge workers when and for such causes as they see fit.

Economic forces, however, set substantial limitations to entire freedom of action by employers—particularly through the working of demand and supply in the labor market—and employers, therefore, are not always free to make the improvements that they are willing and ready to make. This, on the other hand, may not be accepted as a wholly valid excuse; for there are other economic forces, only now being discovered and experimented with, which when taken advantage of work toward freeing the employer to make some at least of the improvements that he favors. These are forces tending toward increased efficiency and reduced costs of production through greater consideration of the human factor in industry. Economies appear to be possible, for example, through shorter working hours that lower the accident rate, and that allow time for recuperation from fatigue; through the elimination of unemployment periods, thus escaping costs due to changes in the labor force; through increased wages—whatever the figure set by competition in the labor market may be—that would enable workers to raise their standard of living and thus maintain a higher degree of resistance against sickness; and through other measures.

INDUSTRIAL BETTERMENT BY EMPLOYERS

No employer in Springfield, as far as we were able to learn, was paying wages above the straight market rate. Neither was any case discovered in which an employer of his own initiative, for humanitarian reasons, had reduced the hours of labor of those in his employ. Even in safeguarding workers from industrial health hazards only one factory among those visited showed a definite effort to do more than the law required; and even in that factory legal requirements were violated in some particulars. Several employers, however, gave workers short vacations on pay, among them a telephone company, two

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department stores, and a five-and-ten-cent store. In most of these cases one week was given to employees who had worked a year or more. Other factories visited either gave no vacations or else allowed them without pay.

A considerable number of employers provided lunch and rest rooms for their workers, especially where many women were employed. These were found at the two laundries visited, at two of the department stores, in a telephone office, and in one large factory. Doubtless similar provisions were made at some



LUNCH AND REST ROOM

This room at the Illinois Watch Company's factory represented the principal type of service remotely approaching welfare work which at the time of the survey investigations was being carried on in the Springfield industrial establishments. But few factories supplied even these accommodations, and where they were provided they were for the use of women workers only

work places not visited. Usually the lunch room was merely a place where the workers could go to eat luncheons brought from home; but one telephone company supplied a light luncheon free and employed a matron to look after the lunch and rest rooms. At the street railway car barns, where men are often idle waiting assignments, a library, club rooms, and baths were maintained. Aside, however, from these limited activities Springfield employers had done very little in the way of welfare work. There was a disposition on the part of some to increase activities; but judg-

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ing from the little that had been effected the prospects for immediate improvement were not promising.

INDUSTRIAL IMPROVEMENTS THROUGH THE WORKERS

A girl earning \$5.00 a week in a Springfield department store shortly before the survey asked for a wage increase. She was told that if she wasn't satisfied she could go elsewhere. To the store her loss was of small consequence. Another girl willing to work for \$5.00 would take her place, and work in the store would move along as it had before. But to the girl the alternative was serious. It meant continuation at less than a living wage, or possible temporary unemployment while seeking another place. Workingmen, moreover, with families to support, when placed in similar situations, hesitate a good deal before giving up employment, and many stay at a wage below what they think they deserve, rather than venture on the uncertain hope of securing higher wages elsewhere.

The case of the girl illustrates the general truth that acting alone employes are practically powerless to win wage concessions, shorter hours, or better work conditions, for they have no means of enforcing their demands. Experience has shown that it is only by acting together that they can force hours down and wages up, or bring about other improvements. The labor union movement, therefore, offers an effective means by which employes may do something worth while toward industrial betterment.

LABOR UNIONS

The present labor union movement in Springfield, as far as we were able to discover, began in 1878. The Knights of Labor were active in the United States before that time and may have been represented in Springfield, but the formation of the typographical union in 1878 marked the beginning of the movement to organize workers by trades. The beginnings, however, were not immediately followed up; and although the cigar makers and carpenters organized during the 80's, labor unionism did not really get under way in Springfield until the 90's.* The plumbers and the bricklayers and masons were organized in 1890; the

* A plasterer's local was started in 1889 but soon disbanded. It was re-organized a number of years later.

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bakers, pressmen, and boilermakers in 1892. In June, 1893, representatives of the barbers, cigar makers, plasterers, printers, painters, mine workers, and hodcarriers met and established the Springfield Federation of Labor, securing a charter from the American Federation of Labor. From that time, although different locals have had occasional setbacks, the growth of the movement in the city has been steady.

A great advance was made in 1897, when after a hard-fought strike the coal mines of the state became thoroughly unionized. The addition of approximately 2,500 to the ranks of organized labor greatly strengthened the union movement by both direct and indirect influence.

At the time of the survey 52 different working groups were represented in Springfield's central labor body, classified under six main divisions, as follows:

Mining: Mine workers (10 locals).

Manufacturing and Mechanical Industries: Bakers, blacksmiths, boilermakers, brewery workers, brick makers, cigar makers, granite cutters, horseshoers, iron moulders, lathers, machinists, printing pressmen, stereotypers, stone cutters, tailors, tool and die makers, typographical workers, and wood workers.

Building and Construction: Bricklayers, carpenters, cement workers, electrical workers (2 locals), painters, plumbers, plasterers, sheet metal workers, stationary engineers, and structural iron workers.

Trade: Bartenders, grocery clerks, and retail clerks.

Transportation: Brewery drivers, ice-wagon drivers, and team drivers (2 locals).

Miscellaneous: Barbers, firemen, laundry workers, musicians (white), musicians (colored), stage employees.

There was also affiliated with the central body a women's trade union league and a federal labor union, the latter being composed of labor union sympathizers not then engaged in any trade. Besides the locals which make up the Springfield Federation of Labor there were also unions not affiliated with the Central Federation among locomotive engineers, firemen, conductors, and switchmen on railroads running into Springfield. Roughly speaking, at least 80 per cent of the workers in the organized trades were members of the union. The most marked exception to this was the laundry workers' local, which had been able to gain

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a foothold in but one establishment. The retail clerks' union was also rather weak.

It is not possible for us to state the exact percentage of workers in Springfield who were members of unions, for a number of the unions could not supply the data. From the figures prepared by some of the unions, however, it appears reasonably correct to put the proportion of the male wage-earners in the city who were union members (including the miners of course) at a little under 50 per cent, while of the female wage-earners less than 5 per cent were union members.* Trades requiring a high degree of skill, and establishments largely patronized by working people, were generally well organized. Only about 12 per cent of workers in manufacturing establishments were members of unions.†

Judging from the data supplied by over half of the various local unions, these organizations had been effective in increasing wages for their members. Most of the unions reported increases in the five years prior to the survey, the hourly rate for sheet metal workers, for example, having advanced from 45 cents to 50 cents; that for laundry workers, from 8 to 11 cents secured five years earlier to 12 to 15½ cents when the report was made; for journeymen stone cutters, from 50 to 56¼ cents; for one group of railroad machinists, from 34 to 38 cents; for bricklayers, from 60 to 70 cents; for ice men, from 20 to 25 cents; bartenders, from 20 to 25 cents; for printing pressmen, from an average of 31¼ to an average of 38½ cents; for printing press assistants, an increase from 25 to 33⅓ cents; and on through practically all of the list. There were no important decreases.

Similarly, as to hours, many of the locals reported reductions in hours per day or per week in the last five years. Sheet metal workers, for example, with an eight-hour day five years before, had recently reduced their hours per week from forty-eight to

* In arriving at the total of male and female wage-earners in the city, upon which to base the percentage figures, occupations not generally organized were excluded. Among males, for example, such occupation groups as farm laborers, workers in professional callings, in the public service, etc., were excluded. Similarly, among women and girls, certain groups of domestic workers, workers in professional and public service, and some others were not counted.

† Statement based on data covering 4,149 workers in 83 manufacturing establishments, being practically all the establishments in Springfield, gathered by the Springfield Commercial Association.

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forty-four. Hours of journeymen stone cutters had been reduced in the same way; hours of union die and tool makers, from fifty-four to fifty; of ice men, from sixty-six to sixty; of electrical workers, from forty-eight to forty-four. In a number of cases where there had been no reduction in hours, the eight-hour day had been gained five years before. In the majority of cases the improvements both as to hours and wages had been brought about without strikes.

Practically all of the unions provided benefits to members or their families in cases of sickness, accident, death, unemployment, or old age. Not all provided for all these contingencies, but practically all provided for some of them. On the other hand, though the need was evident, there were no important evidences of effectiveness on the part of the unions in improving the state inspection service into industrial conditions, or in securing through other methods better enforcement of the labor laws—particularly those relating to child labor.

Among skilled men workers the unions will undoubtedly continue to maintain their strength and perhaps increase it; but among unskilled men and among women workers, labor organization, though it should be striven for, nevertheless does not look so hopeful. In the skilled trades, therefore, male workers acting through their unions, may be counted on to play a part in industrial betterment, but among unskilled men and among women workers—where conditions are farthest from satisfactory—employers and the public must be relied upon chiefly for improvement measures.

LABOR LEGISLATION

That the public has a stake in industrial questions and should shoulder its responsibility was recognized in a substantial manner in Illinois when in 1893 a State Department of Factories and Workshops was created and laws were enacted prohibiting employment of children under fourteen years of age, or of women, in the manufacture of wearing apparel, for more than eight hours a day and forty-eight a week.* Previously, in 1877 and again in

* In 1895 the latter provision was held unconstitutional by the state supreme court. In 1910 the same court declared a ten-hour law for women constitutional. (Ritchie & Co. vs. Wayman and Davies.)

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1891 there had been efforts at child labor legislation, but failure to provide state inspectors to enforce the laws rendered the acts ineffective. Since 1893, the extension of state control over industry has been almost continuous. Following are some of the more important acts which mark this development:

1897. Child labor law enacted covering not only factories but offices, laundries, mercantile establishments, and stores, and fixing maximum hours of labor of children under sixteen years of age at ten per day and sixty per week.

1897. Act passed requiring the installation of blowers to remove dust from metal polishing, buffing, and grinding wheels.

1901. Child labor law strengthened and all establishments required to provide suitable seats for women and girls.

1903. Present child labor law enacted.

1907. Factory Inspection Department established as separate department of the state government and its powers extended.

1907. Present law providing for health, safety, and comfort of workers in factories, mercantile establishments, mills, and workshops enacted.

1907. Act passed to provide for the safety of persons engaged in construction, alteration, or repair of buildings, bridges, viaducts, and other structures.

1908. Act passed preventing employment in coal mines of persons who have not been passed by a State Miners' Examining Board.

1909. Law enacted fixing hours of work of women in factories and laundries at ten per day.

1910. Act passed providing for fire-fighting equipment in coal mines. Later amended and strengthened.

1911. Women's ten-hour law extended to cover mercantile establishments, hotels, restaurants, offices, and other enumerated places.

1911. Law enacted to protect workers from occupational diseases.

1913. Act passed consolidating and strengthening laws to provide for safety and welfare of workers in coal mines.

1913. Present workingmen's compensation law enacted.

Examination of this list shows a fairly rapid extension of the field of labor laws and a gradual strengthening of requirements—but an extension that is not at all unique for an industrial state. Other states have legislated in fields not yet entered in Illinois, as seen, for example, in their establishment of minimum wage boards,

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the prohibition of night work by women, the limitation of the workday to eight hours for women, the guarantee of one day of rest in seven to all workers, the enactment of compulsory compensation laws, and other measures. That the public will exercise increasing influence through legislation for improved industrial conditions appears certain, and should be encouraged, particularly with reference to the strengthening of the child labor laws, the reduction of the hours of working women, the protection of workers from physical hazards, and the establishment of minimum wage boards.

OTHER PUBLIC ACTIVITIES

The influence of the community is potent in ways other than through legislation. Important, in this connection, is the existence of a public opinion that insists upon the fair and full *enforcement* of legislation touching industrial matters; that demands intelligent and even treatment of the interests of both employer and employe before the courts and by court officers; that, in other disputed issues where no official tribunal has jurisdiction, will guarantee to both sides equal consideration before claims are decided; that would make it hard for industries and commercial enterprises maintaining conditions below a reasonable standard to do business in the community; and that would work through other channels as occasion demands. Some of these may take form in the establishment and maintenance of agencies to furnish pertinent information on the quality of present law enforcement (through bureaus of government research, committees and commissions on public efficiency, industrial surveys, etc.); in the selection of persons for judicial positions who recognize the importance and complexity of industrial questions and have gone to some pains to make themselves intelligent upon them; in the creation of machinery for arbitration and conciliation of industrial differences; and in the organization and support of quasi-public institutions, such as consumers' leagues, civic improvement societies, and an independent press, which afford opportunity in the public interest to thresh out acute industrial situations and to take organized action. This field of activity offers unlimited possibilities for public service; but in many regards it is still virgin soil in Springfield.

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At the same time the community must be willing and expect to bear its share of the legitimate cost of maintaining good industrial standards. There undoubtedly are many cases in which employers are already doing all that they can. In such cases, where the cost of necessary improvements cannot be financed out of the reasonable proceeds of the business, the public, granting that the business satisfies a real need in the community, must be prepared to assume its part of the extra charges, which in most cases would take the form of increased prices. In other words, in addition to giving its preference to establishments meeting good standards as to work conditions, the public should be ready to pay its just share of the costs involved.

We have then these three main forces or groups of interested parties, the employer, the worker, and the public, which may be expected to act toward making industry contribute toward, and not detract from, the general welfare. Let us look now at the more specific measures for improvement that need to be adopted and the particular division or sub-groupings of these social forces that should give assistance.

MEASURES FOR IMPROVEMENT*

REORGANIZATION OF STATE INDUSTRIAL BODIES INTO A DEPARTMENT OF LABOR AND MINING

The first and one of the most important conclusions regarding industrial conditions in Springfield is that the state bodies having to do with industrial conditions should be reorganized into a single Department of Labor and Mining. While the survey has dealt primarily with conditions in Springfield and Sangamon County, it is nevertheless clear that some of the remedies for local industrial evils must come through action by the state. Springfield cannot disengage itself from the state in these matters, and there is reason to believe that industrial conditions in many other parts of the state are no better than here. Springfield, moreover, has a special responsibility for assisting toward a better situation because of its natural position of leadership in the state and because it is no longer uninformed upon its more urgent needs.

It has been seen that much confusion prevails in administering

* The measures are only summarized here. For more details see earlier parts of the report.

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the labor laws (and in the laws themselves) because of the numerous uncoördinated state bodies that have to do with industry and labor. For example, in the reporting of work accidents similar establishments are required in some cases to report to entirely different authorities, and the different state authorities do not compile these facts for the same periods. Again there is considerable difference in the methods and thoroughness in the work of the mine inspectors, railway safety inspectors, and those charged with inspecting factories, mercantile establishments, mills, and workshops; and so on—the whole situation need not be reviewed at this point.*

It is, therefore, recommended that the numerous independent bodies dealing with labor conditions be consolidated into one state department, to be called the Department of Labor and Mining, with bureaus organized to have charge of special work. These should include a bureau of inspection responsible for railroad, factory, and other inspection service, except mining; a bureau of child labor; of employment, including supervision of the public employment agencies; of mining; of research and labor statistics; and any other bureaus that may later be needed. The plan of reorganization should provide for the establishment of an Industrial Commission as an integral part of the new labor department, with the commission, instead of a single commissioner, acting as the executive head of the department.†

This consolidation and coördination of functions is urged as of primary importance in improving labor conditions all along the line, insuring safety from accident and disease, reducing child labor and unemployment, prohibiting the extension of work periods beyond legal hours, and securing better industrial relations.

* For more detailed discussion of the situation see pp. 14, 19, 27, and 58.

† A number of states have reorganized their labor bodies in recent years, among them Wisconsin, Ohio, New York, and Pennsylvania. This recommendation is in accord with one made by the recent Illinois Efficiency and Economy Committee, which outlines a reorganization plan combining the important features of the two differing types represented by Wisconsin and New York. For details of Illinois plan see report of the Illinois Efficiency and Economy Committee, 1915, pp. 49-53. For description of the new Wisconsin and New York plans see (for Wisconsin) *The Survey*, Vol. 27, pp. 1001-2; Vol. 29, pp. 440-448; and *Bulletins of the Industrial Commission of Wisconsin*. For New York see *The Survey*, Vol. 34, pp. 101-102.

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INDUSTRIAL COMMISSION

It has been seen earlier in the report that safety from fire and other accidents while at work, and from disease due to work conditions, presents serious problems in Springfield.* In some instances these were due to lack of law enforcement; in others to inadequate legislation. Remedies for poor enforcement have already been discussed. Where inadequate legislation was the cause two courses are open. In some instances it may be advisable to handle particular evils through specific legislation; but for the great majority of the varying, detailed, and multitudinous conditions presenting physical hazards it is not practicable to trust to specific laws. It is recommended instead that an act be passed laying down the general principle, as is done by the Wisconsin law, that all places of employment must be safe and that every employer must furnish and use safety devices and safeguards, "and shall do every other thing reasonably necessary to protect the life, health, safety, and welfare of employes." It is further recommended that, as a part of the plan to reorganize the state industrial agencies, an Industrial Commission or Industrial Board be created as a part of the new labor department, and charged with administering the law—the commission to be composed of three or five members having equal powers, one of whom should be chairman. For the assistance of the commission, advisory committees, upon which both employers and employes are represented, should be provided for. The commission should also be in executive control of the reorganized labor department.

The Industrial Commission should have jurisdiction over places of employment, and be vested with power to ascertain and prescribe standards of safety, to order safeguards and safety devices, to fix reasonable standards for the construction, repair, and maintenance of places of employment, and to issue orders designed to protect the life, health, safety, and welfare of employes, and to act as a board of arbitration, mediation, and conciliation. The law creating the commission should provide for prompt and full reporting of all accidents to this single body. Thus, instead of enacting special laws, the commission should, after an investiga-

* See pp. 11-43.

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tion and a hearing in each case, issue an order covering the point in question.*

WORKMEN'S COMPENSATION

Again, the investigations in Springfield showed that while the workmen's compensation law established greater justice in remuneration for work accidents, it failed, in many of the most hazardous occupations, because of its optional feature, to accomplish without litigation prompt and specific compensation for industrial injuries. A new law, or amendment to the present law, much more firmly establishing the basic principle of compensation—that industry should bear the costs of injuries due to hazards which it has introduced—should be secured. The law should thus make compensation compulsory. This will not only provide more adequately for injured workers, but will prove another powerful influence for the prevention of accidents.

The administration of the workmen's compensation act should be made a function of the Industrial Commission of the reorganized labor department.

HEALTH INSURANCE

Conditions affecting health in Springfield industries have been shown to be of great variety and in many instances to constitute real dangers. Some of these conditions can be changed through preventive action either voluntarily taken by employers and workers, or required by state regulation, or through both means. Some of the resulting damages may be borne by employers through a broad interpretation of the compensation laws; but there will still remain a large amount of occupational sickness which falls as a disproportionately heavy economic and physical burden upon the shoulders of the worker. It should not be his loss, but should at least be shared, if not entirely borne, by the industry and the public. A means to this end is found in health insurance. It is believed, moreover, as in the case of workmen's compensation

* See Industrial Commission Law, Laws of Wisconsin, 1911, Chapter 485.

For a full description and discussion of the industrial commission idea see report written by Prof. John R. Commons and signed by a majority of the members of the United States Commission on Industrial Relations in the final report of the commission.

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laws, that health insurance legislation will act as a powerful force for prevention of disease. We recognize, however, that information on the actuarial questions involved and upon the proportions in which the various interested parties should participate in the insurance cost is still very limited as applied to conditions in the United States. It is recommended, therefore, that the first step be taken now; namely, that a commission of the legislature be appointed to study and report upon the matter.*

CITY ENFORCEMENT OF FIRE REGULATIONS

In addition to a statute requiring "sufficient and reasonable means of escape" from work places in case of fire, a second statute stipulates that all factory buildings over two stories high must have fire-escapes of a type to be determined by the local government. Enforcement, however, is left to the sheriff and grand jury, neither of whom ever inspects factories. Moreover, the city government, as far as we could learn, has never determined what is a safe and acceptable type of fire-escape.

A Springfield ordinance enacted many years ago also deals with fire protection, but because of changes in the official machinery provided for determining the type of fire-escape to be required, the ordinance had not been effective.

The necessary steps should be taken in both cases to see that a standard type of fire-escape is determined upon, and that the laws are enforced. The consideration of other measures to prevent fires and to insure safety against them is urged as an integral part of the work of the fire department. This is especially important until the state Industrial Commission, here recommended, covers the field.

SAFETY CAMPAIGNS AND CO-OPERATION FOR SAFETY

Safety for the worker while at work is not wholly dependent upon legislation and state action. It can be promoted by the employer who, out of a feeling of social responsibility and interest

* For a presentation of European experience in insurance against industrial accidents, sickness and death, invalidity and old age, and unemployment, see Frankel, Lee K., and Dawson, Miles M.: *Workingmen's Insurance in Europe*. Russell Sage Foundation Publication. New York, Charities Publication Committee, 1910.

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in his workers, makes it a point to be always in advance of the law, seeing to it that dangerous conditions are eliminated as soon as recognized; it can be promoted by the worker, who out of a due regard for the welfare of his fellow-workers, himself, and the interests of his employer, exercises as much care as possible in his work; by the public, which, recognizing its responsibility to the workers as well as its own stake in the injury problem lends its assistance through educational methods and campaigns for safety; and by all three through an appreciation of the importance of co-operation. This is not a new kind of activity, for many large corporations have engaged in it with gratifying results for a number of years. With the exception of only one or two employers, however, no such accident-prevention work had ever been carried on in Springfield by any of the three main groups of interested parties referred to. Such work should enlist the energies not of one or two exceptional employers, but of all, as well as the employers' organizations; for employers because of their large powers have a special responsibility in determining conditions in their establishments. It is a fruitful field also for labor unions, by instructing and encouraging the workers to use care, and by bringing hazardous conditions to the notice of responsible persons. Educational work by civic bodies and citizens' committees, and co-operation of employers, employees, and such public agencies are also recommended.*

ENFORCEMENT OF CHILD LABOR LAW

It has been seen that neither the enforcement of the child labor law of Illinois nor the law itself was satisfactory. Children under sixteen years of age were being employed for illegal hours or in prohibited employments. The remedy for this situation must come through the State Factory Inspection Department. The force of inspectors in this department should be increased to make effective law enforcement possible, and the chief inspector should then be held strictly responsible for the conduct of the work.

* In its bulletin (No. 13) for October, 1915, the Massachusetts Accident Board reports the results of the acceptance of the board's invitation by certain employers to organize for safety. In the year after the invitation was accepted, among other gratifying results was a reduction of 36 per cent in the wage loss due to accidents, and a saving of 41 per cent in the compensation paid.

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Better adjustment of the hours of inspectors' work to the character of their duties, the adoption of a policy of giving full publicity to successful prosecutions, and better work by the truant officer are among the more detailed recommendations.

Under the reorganization plan recommended the enforcement of the child labor law should be in the hands of a bureau of child labor in the new department of labor and mining.

CHILD LABOR LEGISLATION

It has been seen also that the provisions of the child labor law governing age and school certificates are open to easy evasion. The remedy, of course, lies with the legislature. The present law should be amended, making it more difficult to evade the requirements regarding proof of age, requiring at least a sixth grade education or its equivalent before a child under sixteen may leave school to go to work, and requiring that evidence of normal development and sound physical condition be produced before a work certificate can be secured.

WAGES AND UNEMPLOYMENT

Wages and unemployment were considered together because the income of workers is measured not alone by wage rates, but also by the number of days of employment through the year. One important conclusion became clear in this connection. Springfield workers, except in a few trades, were suffering greatly reduced incomes because of a great deal of seasonal and irregular employment. One of the most important measures here recommended for reducing the amount and bad effects of this irregular employment, and one which has general application to practically all kinds of employment, is the development of greater efficiency in the work of the Springfield free employment agency. As a part of the reorganization plan, already recommended, by which the various industrial bodies of the state should be brought together in a Department of Labor and Mining, it is urged that all state employment offices be put under a bureau of this new department. In the meantime, however, a number of improvements in methods in the Springfield office should be instituted.*

* For detailed statement of improvements recommended see page 101.

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In the coal mining industry a certain amount of irregular employment is artificially stimulated by biennial agreements between the operators and the union. To do away with as much as possible of this, it is recommended that either negotiations between the operators and the men be started earlier, or that an arrangement such as was recently adopted in the anthracite district be made, which would provide for the continuance of work while negotiations are in progress or until it should become clear that a new agreement could not be reached. There is also a large amount of seasonal work due to seasonal demand for products, and the operation of too many mines is a factor. To mitigate the results of this, it is recommended that the industry be regularized through as much summer production as possible.* It is also recommended that careful consideration be given to the question of government control, such as is being tried in Germany, which prevents the opening of new mines until there is commercial need for them.

Among skilled and semi-skilled workers in factories, the building trades, and on railroads, as we have seen, labor unions have had an effective influence in increasing wages. In fact wage conditions among all union workers were generally better than among non-union workers in Springfield, though probably this fact is not due entirely to union influence. It appears, however, that the unions offer one important measure for wage increases among the better trained and the skilled workers.

The wages of unskilled male workers in Springfield and of many women workers, especially in laundries, five-and-ten-cent stores, and restaurants, were very low—too low in many cases to permit the women to maintain themselves properly or to permit men to support an average family of five or six in decency. The problem of increasing the wages of these groups, however, and of reducing the irregularity of their employment is by no means simple. Up to the present the labor union movement has made but little progress with them. Union men should face this as one of their serious problems and see in it both a responsibility

* For statement regarding economies through keeping a more continuous labor force at work, which will in some measure compensate for losses due to reduction in the heat value of coal mined several months in advance, see footnote, page 79.

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and an opportunity for rendering service to a group less able to help themselves than are the great majority of union members.

The wage problem, whether among skilled or unskilled, is not entirely a local problem; but its solution nevertheless depends in part upon the action of localities. A number of measures, however,—some of them indirect in their influence,—are recommended to citizens of Springfield as helpful toward improving the lot of low-paid workers. Among these are: the prohibition of child labor with the probable consequent increase in the demand for and the wage of adult labor; and as a corollary of this, the development of better industrial education for children now of school age, which shall prepare the coming workers for better paid and higher types of work; the establishment of better wage rates for manual labor on public works; and the establishment of minimum wage standards.

In the case of sales girls in mercantile places, and other low-paid women workers, some improvement might be brought about through organization of the workers—a measure which at best will be difficult but which should be thoroughly tried. A second measure is the utilization of public opinion expressed either through constant objection to low wages in specific cases or through consumers withdrawing patronage from stores paying low wages. This has been worked out in some communities through the organization of consumers' leagues. In addition to these, the establishment of a minimum wage board through which assurance may be had that wages at least adequate for the self-support of girls giving the whole of their working time to stores or other work places is recommended.

UNEMPLOYMENT INSURANCE

As already stated, unemployment was found to be a serious problem in Springfield. The measures already recommended to deal with it are aimed at as immediate relief as possible. The time when a system of unemployment insurance, if it should seem desirable, could be instituted does not appear close enough to offer an early improvement of conditions. It is recommended, however, that thorough study of the unemployment situation and

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unemployment insurance be taken up through a commission to be created by the legislature.*

SEVEN-DAY LABOR

Among both men and women a number were found working seven days per week. The courts of New York state have held a law prohibiting the seven-day work-week in factories and mercantile establishments to be constitutional. A similar law is recommended for Illinois. It is urged especially that the churches and other religious bodies, which must at least believe that all persons should have one day of rest in seven, give this proposed legislation their vigorous support.

HOURS OF WORK OF WOMEN

Many women in Springfield work ten hours a day—often standing—and a few women are night workers. Many other states, including all the great manufacturing states, give women greater protection from long hours of labor than is given by the state of Illinois. To correct the present situation the law allowing women to work ten hours a day seven days per week should be changed to make it illegal to employ women at most for more than eight hours per day or forty-eight hours per week. This would merely be eliminating the seven-day week and reducing hours on the other six days to eight.

Moreover, the law should be amended to prohibit night work by women and girls.

HOURS OF WORK OF MEN

The hours of labor of men in a few Springfield industries are exceedingly long. A majority of the trade union members, however, work only eight hours. It would seem, therefore, that the union offers one important means—probably the most practical immediate means—to better working hours; and workers would do well to look into the accomplishments of the local labor organizations.

Since, however, unskilled laborers are difficult to organize and it is among them that excessive hours are most prevalent, it

* See footnote on page 148.

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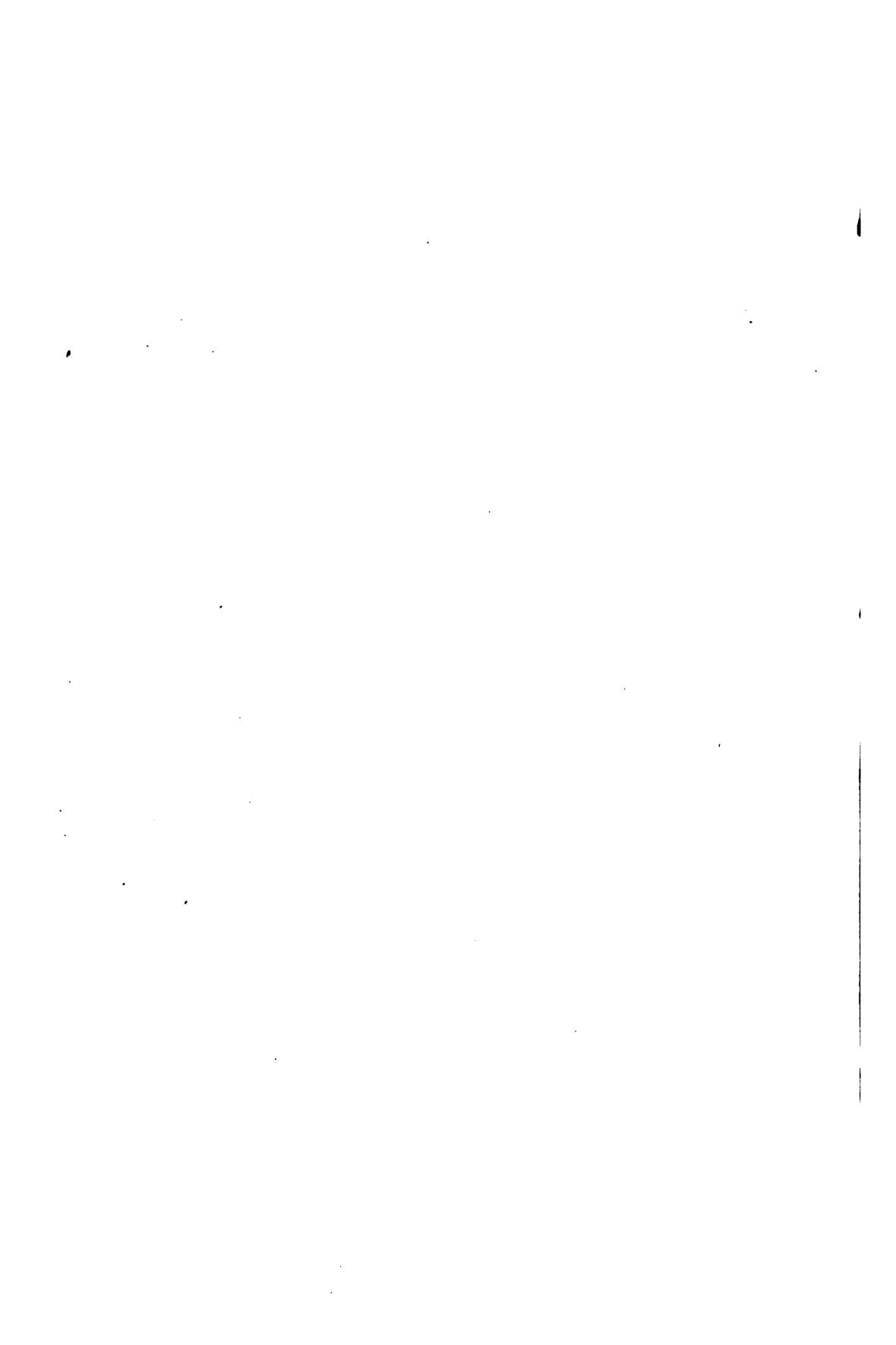
seems likely, if long hours of labor are soon to be eliminated, that Illinois and other states must secure this result through legislation. There is a growing opinion that there is small reason to differentiate between men and women in restricting hours; and that there is ample reason for action by the state to regulate the hours of men's work. Illinois as a great industrial state has an opportunity to lead in this advance movement.

In addition, and applying to the hours of both men and women, action by consumers through public protest and the withdrawal of patronage where hours of work are harmful, should be taken. Also a number of the indirect methods already recommended for dealing with low wages apply in some degree to the reduction of working hours that are too long.

FINALLY

Finally, it should be said that the recommendations here brought together, and stated in more detail in earlier parts of the report, are intended to be practical and workable suggestions for immediate action. They do not represent impossibly high standards; many of them have been reached either elsewhere in Illinois or in other states. It is hoped they will appeal to the citizens of Springfield and Illinois not alone as reasonable measures but also as measures of such importance to the whole community that liberal and early support will be enlisted for them.

APPENDICES



APPENDIX A

STANDARDS OF LIVING AND LABOR

Report of Committee on Standards of Living and Labor of National Conference of Charities and Correction*

By Owen R. Lovejoy, Secretary National Child Labor Committee, Chairman

The following statement by the Committee on Standards of Living and Labor is prepared by the Chairman of the committee with the advice and approval of its members.

While individual members of the committee have presented a variety of opinions on the topics, this statement expresses the majority view, and with the exception of two or three paragraphs is signed in its entirety by all members of the committee.

The group of propositions which this committee undertakes tonight to present for consideration is the result of mature deliberation at every point. The statement is an outgrowth of efforts of the committee during three years of Conference history, etc., etc.

SOCIAL STANDARDS FOR INDUSTRY

THE STANDARD OF LIVING

The welfare of society and the prosperity of the state require for each individual such food, clothing, housing conditions, and other necessities and comforts of life as will secure and maintain physical, mental, and moral health. These are essential elements in a normal standard of living, below which society cannot allow any of its members to live without injuring the public welfare. An increasing percentage of our population derives the means to maintain this normal standard through industry. Industry therefore must submit to such public regulation as will make it a means of life and health, not of death or inefficiency.

This regulation has to do with hours, safety, over-strain, and other condi-

* From Proceedings of National Conference of Charities and Corrections, Cleveland Meeting, 1912, p. 376 *et seq.*

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tions of the day's labor; with premature employment, unemployment, incapacity, and other factors which shorten or impair the length of the working life; with wages as the basis which work affords for a normal standard of home life; with unwise taxation and other community conditions which in our industrial centers exploit wages; with insurance against those risks of trade—death, injury, occupational diseases—which break in upon the working years and wipe out earnings; and with protection against poverty in old age when productive labor is ended.

The community has a right to complete knowledge of the facts of work.

The community can cause to be formulated minimum occupational standards below which work is carried on only at a human deficit.

The community should bring such subnormal industrial conditions within the scope of governmental action and control in the same way as subnormal sanitary conditions are subject to public regulation, and for the same reason—because they threaten general welfare.

Such minimum standards in relation to Wages, Hours, Housing, Safety, and Health, Term of Working Life, and Workmen's Compensation are called for if the United States is to keep abreast with the social statesmanship of other great industrial nations; they are counseled by physicians and neurologists who have studied the effect of fatigue and over-strain upon health; by economists who have analyzed the extravagance of unskilled labor, excessive hours, and low pay; and by social workers who deal with the human wastes of industry through relief societies, or through orphanages, hospitals, insane asylums, and almshouses.

Wherever they are not the standards of given establishments or given industries; are unprovided for by legislatures, or are balked by unenlightened courts, the community pays a heavy cost in lessened efficiency and in misery. Where they are sanctioned and enforced, the conservation of our human resources contributes the most substantial asset to the wealth of the future.

I. WAGES

1. A LIVING WAGE. A living wage for all who devote their time and energy to industrial occupations. The monetary equivalent of a living wage varies according to local conditions, but must include enough to secure the elements of a normal standard of living; to provide for education and recreation; to care for immature members of the family; to maintain the family during periods of sickness; and to permit of reasonable saving for old age.

2. MINIMUM WAGE COMMISSIONS. Many industrial occupations, especially where women, children, and immigrant men are employed, do not pay wages adequate to maintain a normal standard of living. Minimum wage commissions should therefore be established in each state to inquire into

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wages paid in various industries, and to determine the standard which the public will sanction as the minimum.

3. **WAGE PUBLICITY.** Properly constituted authorities should be empowered to require all employers to file with them for public purposes such wage scales and other data as to earnings as the public element in industry demands. The movement for honest weights and measures has its counterpart in industry. All tallies, scales, and check systems should be open to public inspection and inspection of committees of the workers concerned. Changes in wage rates, systems of dockage, bonuses, and all other modifications of the wage contract should be posted, and wages should be paid in cash at least every two weeks.

II. HOURS

1. **EIGHT-HOUR DAY.** The establishment of the eight-hour day for all men employed in continuous industries, and as a maximum for women and minors in all industries.

2. **SIX-DAY WEEK.** The work period limited to six days in each week; and a period of rest of forty consecutive hours in each week.

3. **NIGHT WORK.** Night work for minors entirely prohibited; an uninterrupted period of at least eight hours' night rest for all women; and night work for men minimized wherever possible.

III. SAFETY AND HEALTH

1. **INVESTIGATION.** An investigation by the Federal Government of all industries, on the plan pursued in the present investigation of mining, with a view to establishing standards of sanitation and safety and a basis for compensation for injury. This should include a scientific study and report upon fire-escapes, safety appliances, sanitary conditions, and the effects of ventilation, dust, poisons, heat, cold, compressed air, steam, glare, darkness, speed, and noise.

2. **PROHIBITION OF POISONS.** Prohibition of manufacture or sale of poisonous articles dangerous to life of worker, whenever harmless substitutes are possible, on the principle already established by Congress in relation to poisonous phosphorous matches.

3. **REGULATION ACCORDING TO HAZARD.** In trades and occupations offering a menace to life, limb, or health, the employment of women and minors regulated according to the degree of hazard. No minor under 18 employed in any dangerous occupation, or in occupations which involve danger to fellow workmen or require use of explosives, poisonous gases, or other injurious ingredients. Unskilled craftsmen who do not read and understand

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the English language forbidden to handle dangerous machinery or processes known to be extra hazardous.

4. **STANDARDIZED INSPECTION.** Inspection of mines and work places standardized either by interstate agreement or by establishment of a Government standard. All deaths, injuries, and diseases due to industrial operations to be reported to public authorities as required in accident laws of Minnesota, and with respect to some trade diseases in New York.

IV. HOUSING

1. **THE RIGHT TO A HOME.** Social welfare demands for every family a safe and sanitary home; healthful surroundings; ample and pure running water inside the house; modern and sanitary toilet conveniences for its exclusive use, located inside the building; adequate sunlight and ventilation; reasonable fire protection; privacy; rooms of sufficient size and number to decently house the members of the family; freedom from dampness; prompt, adequate collection of all waste materials. These fundamental requirements for normal living should be obtainable by every family, reasonably accessible from place of employment, at a rental not to exceed 20 per cent of the family income.

2. **TAXES.** To protect wage earners from exorbitant rents and to secure for them that increased municipal service demanded by the massing together of people in thickly settled industrial communities, a greater share of taxes to be transferred from dwellings to land held for speculative purposes the value of which is enhanced by the very congestion of these industrial populations.

3. **HOME WORK.** Factory production to be carried on in factories. Whenever work is given out to homes, abuses are sure to creep in which cannot be controlled by any known system of inspection or supervision.

4. **TENEMENT MANUFACTURE.** Tenement house manufacture is known to be a serious menace to the health, education, and economic independence of thousands of people in large cities. It subjects children to injurious industrial burdens and cannot be successfully regulated by inspection or other official supervision. Public welfare, therefore, demands for city tenements the entire prohibition of manufacture of articles of commerce in rooms occupied for dwelling purposes.

5. **LABOR COLONIES.** In temporary construction camps and labor colonies, definite standards to provide against over-crowding, and for ventilation, water supply, sanitation, to be written into the contract specifications, as now provided in the New York law.

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V. TERM OF WORKING LIFE

Society may reasonably demand from every normal individual his self-support during a certain period of life. This period should be bounded by a minimum age, to protect against premature labor, and a maximum age beyond which the wage earner should find himself economically independent of daily labor. Adoption of the following standards will promote this end:

1. **EMPLOYMENT OF CHILDREN.** Prohibition of all wage-earning occupations for children under 16 years of age.

2. **EMPLOYMENT OF WOMEN.** Prohibition of employment of women in manufacturing, commerce, or other trades where work compels standing constantly. Also prohibition for a period of at least eight weeks at time of child birth.

3. **INTERMITTENT EMPLOYMENT.** Any industrial occupation subject to rush periods and out-of-work seasons to be considered abnormal, and subject to Government review and regulation. Official investigation of such intermittent employment and other forms of unemployment as a basis for better distribution of immigrants, for guiding seasonal laborers from trade to trade, and other methods for lessening these evils.

4. **THE UNEMPLOYABLE.** The restrictions upon employers set forth in this platform will lead them to refuse to engage any who fall below a grade of industrial efficiency which renders their work profitable. An increased army of industrial outcasts will be thrown upon society to be cared for in public labor colonies or by various relief agencies. This condition will in turn necessitate a minimum standard of preparation, including at least sufficient educational opportunity to abolish illiteracy among all minors and to train every worker to some form of industrial efficiency.

VI. COMPENSATION OR INSURANCE

COMPENSATION DEMANDED. Both social and individual welfare require some effective system of compensation for the heavy loss now sustained by industrial workers as a result of unavoidable accidents, industrial diseases, sickness, invalidity, involuntary unemployment, and old age.

1. **ACCIDENTS.** Equitable standards of compensation must be determined by extensive experience, but there is already ample precedent for immediate adoption as a minimum of the equivalent of four years' wages in compensation for accidents resulting fatally. Compensation for accidents resulting in permanent disability should not be less than 65 per cent of the annual wage for a period of 15 years.

2. **TRADE DISEASES.** For diseases clearly caused by the nature and conditions of the industry, the same compensation as for accidents.

3. **OLD AGE.** Service pensions or old age insurance whenever instituted

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so protected that the person who withdraws or is discharged from the employment of a given company does not forfeit his equity in the same.

4. **UNEMPLOYMENT.** Unemployment of able-bodied adult men under 65 years of age is abnormal and wasteful, and is as proper a subject for recognition by the public authorities as contagious disease or other abnormal conditions which menace the public well being. The demand for insurance against unemployment increases with the increasing specialization in industry. The development of state, municipal, and private agencies to insure against unemployment in European countries affords ample information for the guidance of such enterprises in America.

APPENDIX B

PRINCIPLES ADOPTED BY THE FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA

The Federal Council of the Churches of Christ in America is a national federation of 30 church denominations and communions. The following principles, which have come to be known as The Social Creed of the Churches, were adopted by the Federal Council at its meeting in Chicago on December 9, 1912.

The Churches must stand:

For equal rights and complete justice for all men in all stations of life.

For the protection of the family, by the single standard of purity, uniform divorce laws, proper regulation of marriage, and proper housing.

For the fullest possible development for every child, especially by the provision of proper education and recreation.

For the abolition of child labor.

For such regulation of the conditions of toil for women as shall safeguard the physical and moral health of the community.

For the abatement and prevention of poverty.

For the protection of the individual and society from the social, economic, and moral waste of the liquor traffic.

For the conservation of health.

For the protection of the worker from dangerous machinery, occupational disease, and mortality.

For the right of all men to the opportunity for self-maintenance, for safeguarding this right against encroachments of every kind, and for the protection of workers from the hardships of enforced unemployment.

For suitable provision for the old age of workers, and for those incapacitated by injury.

INDUSTRIAL CONDITIONS

For the right of employes and employers alike to organize for adequate means of conciliation and arbitration in industrial disputes.

For a release from employment one day in seven.

For the gradual and reasonable reduction of the hours of labor to the lowest practicable point, and for that degree of leisure for all which is a condition of the highest human life.

For a living wage as a minimum in every industry, and for the highest wage that each industry can afford.

For a new emphasis upon the application of Christian principles to the acquisition and use of property, and for the most equitable division of the product of industry that can ultimately be devised.

THE SPRINGFIELD SURVEY

APPENDIX C

SCHEDULES USED IN THE SURVEY

NAME	ADDRESS				FLOORS	BUSINESS																																																							
OCCUPATION	BUILDING TYPE				NO. OF FLOORS	STAB. CONSTRUCTION																																																							
	NATURE OF PRODUCT																																																												
	MARKET FOR GOODS					YRS. IN BUSINESS																																																							
	M.	W.	M.	W.	M.	W.																																																							
	BEST PAID PROCESS				MAX. WAGE	LOWEST PAID																																																							
	WAGES OF LARGEST GROUP					MIN. WAGE																																																							
	ADDITIONS				OF MEN	OF WOMEN																																																							
	DEDUCTIONS				PROFIT SHARING	PREMIUMS																																																							
	EMPLOYEES				FINER	CHARGES FOR SUPPLIES																																																							
	METHOD OF TEACHING LEARNERS				SYSTEM OF PROMOTION	SCARCITY OF EXP. WORKERS																																																							
	MAX. FORCE				MIN. AGE	NEED OF TRADE SCHOOLS																																																							
TOTAL EMPLOYED	NATIONALITIES				MEN	WOMEN																																																							
	PREDOMINANT				OTHER	INSPECTIONS																																																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">TRADE UNION</th> <th colspan="4">BENEFITS</th> </tr> <tr> <th colspan="2">POLICY REGARDING MEN</th> <th colspan="2">WOMEN</th> <th>SICK</th> <th>ACCIDENT</th> <th>DEATH</th> </tr> </thead> <tbody> <tr> <td>BUSY SEASON</td> <td>MONTHS</td> <td>LENGTH OF EMPLOYMENT OF MAX. FORCE</td> <td>MIN. FORCE IN PAST YEAR</td> <td>WEEKS PART TIME</td> <td>WEEKS WITHOUT WORKERS</td> <td>PENSION</td> </tr> <tr> <td>HOURS</td> <td>A. M.</td> <td>P. M.</td> <td>MOON</td> <td>TOTAL DAILY</td> <td>TOTAL WEEKLY</td> <td>PAYMENT FOR SAT. HALF HOLIDAYS</td> </tr> <tr> <td>OVERTIME</td> <td>BEGIN</td> <td>END</td> <td>SATURDAY</td> <td>SUPPER</td> <td>ENTIRE FORCE KEPT</td> <td>RATE OF PAY</td> </tr> <tr> <td>WORK PLACE</td> <td>LIGHTING</td> <td>CLOSING</td> <td>KIND</td> <td>VENTILATING SYSTEM</td> <td>CLEANLINESS</td> <td>NOISE</td> </tr> <tr> <td>OCCUPATIONAL DANGERS</td> <td>SAFEGUARDS</td> <td>INVESTIGATOR</td> <td colspan="4">WELFARE WORK</td> </tr> <tr> <td>DATE</td> <td colspan="2">RECORD OF ESTABLISHMENT</td> <td colspan="4">SOURCE OF INFORMATION</td> </tr> </tbody> </table>							TRADE UNION		BENEFITS				POLICY REGARDING MEN		WOMEN		SICK	ACCIDENT	DEATH	BUSY SEASON	MONTHS	LENGTH OF EMPLOYMENT OF MAX. FORCE	MIN. FORCE IN PAST YEAR	WEEKS PART TIME	WEEKS WITHOUT WORKERS	PENSION	HOURS	A. M.	P. M.	MOON	TOTAL DAILY	TOTAL WEEKLY	PAYMENT FOR SAT. HALF HOLIDAYS	OVERTIME	BEGIN	END	SATURDAY	SUPPER	ENTIRE FORCE KEPT	RATE OF PAY	WORK PLACE	LIGHTING	CLOSING	KIND	VENTILATING SYSTEM	CLEANLINESS	NOISE	OCCUPATIONAL DANGERS	SAFEGUARDS	INVESTIGATOR	WELFARE WORK				DATE	RECORD OF ESTABLISHMENT		SOURCE OF INFORMATION			
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DATE	RECORD OF ESTABLISHMENT		SOURCE OF INFORMATION																																																										

THE SPRINGFIELD SURVEY, 1914.

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INDUSTRIAL CONDITIONS

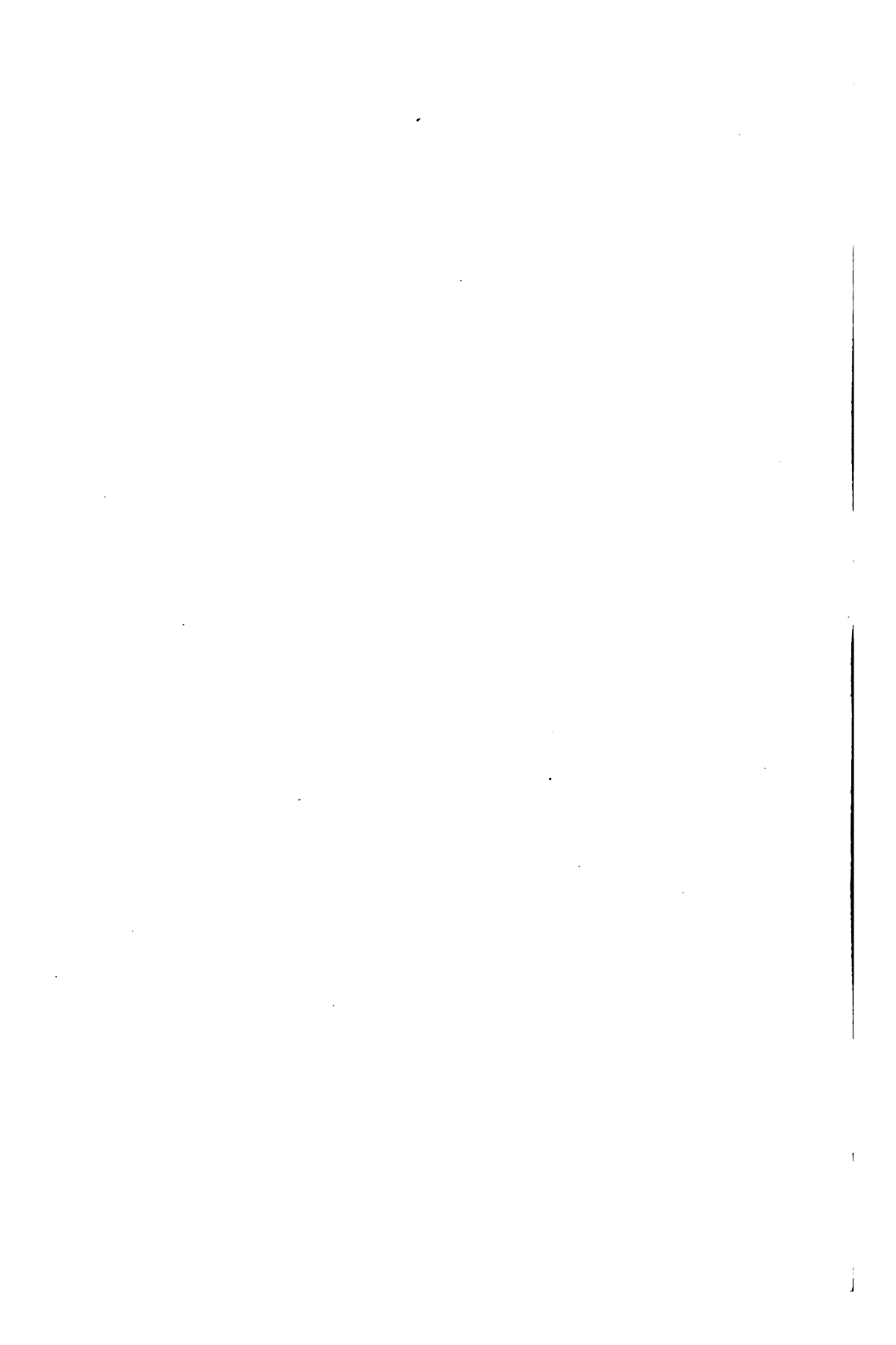
NAME OF FIRM		ADDRESS		BUSINESS DEPARTMENT		FLOOR	
NAME OF WORKER		ADDRESS		DATE OF ENTERING, LEAVING		NATIONALITY DATE OF BIRTH	
PROCESSES OF WORK		POSTURE AT WORK					
TRAINING IN WORKROOM		BY WHOM GIVEN		KIND OF WORK		LENGTH OF TRAINING	
WEEKLY WAGES		FIRST IN THIS ESTABLISHMENT, LAST		T. P. T. P. T. P.		IF STILL HERE, WAGE LAST WEEK	
FINES		RATE FOR LATENESS		SPOILED WORK		OTHER	
REGULARITY IN PAST		WEEKS LOST IN THIS JOB, DUE TO		BLACK SEASON		PART TIME VACATION, HOLIDAYS (WITHOUT PAY)	
HOURS OF LABOR		NORMAL		BEGIN		END	
OVERTIME		NUMBER OF TIMES PER WEEK		CLOSING HR.		SATURDAY	
HOME WORK		KIND		HOURS		EARNINGS	
WORK ROOM		LUNCH ROOM PRIVILEGES		DRESSING ROOM		TOILETS (CONDITION)	
ILLEGAL EMPLOYMENT OF WORKER						LIGHTING DRINKING WATER	
DATE		INVESTIGATOR		SOURCE OF INFORMATION			
COMMITTEE ON WOMEN'S WORK. FORM 12, DEC. '11.—WORKER'S RECORD OF FACTORY							

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